FLECK 2750 DOWNFLOW

SERVICE MANUAL

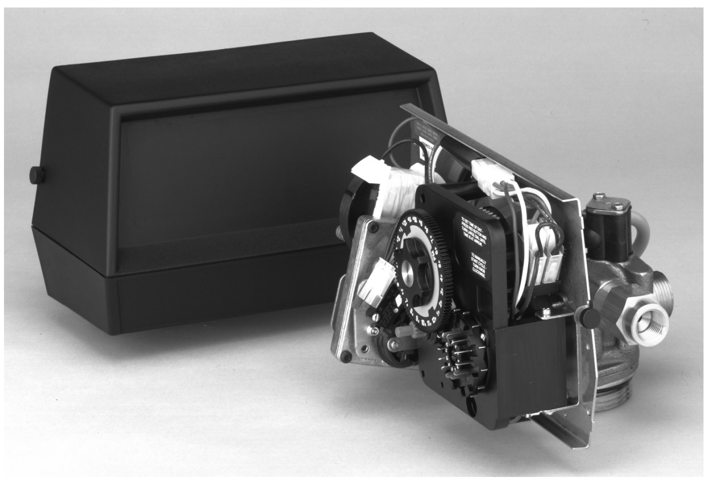


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CALIFORNIA PROPOSITION 65 WARNING

⚠ WARNING: This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

JOB SPECIFICATION SHEET

Job Number: ____________________

Model Number: ____________________

Water Hardness: ____________________ ppm or gpg

Capacity Per Unit: ____________________

Mineral Tank Size: __________ Diameter: ________ Height: ________

Salt Setting per Regeneration: ____________________

1. **Type of Timer:**
   A. 7 Day or 12 Day
   B. Meter Initiated
2. **Downflow:** **Upflow** **Upflow Variable**
3. **Meter Size:**
   A. 3/4-inch Std Range (125 - 2,100 gallon setting)
   B. 3/4-inch Ext Range (625 - 10,625 gallon setting)
   C. 1-inch Std Range (310 - 5,270 gallon setting)
   D. 1-inch Ext Range (1,150 - 26,350 gallon setting)
   E. 1-1/2 inch Std Range (625 - 10,625 gallon setting)
   F. 1-1/2 inch Ext Range (3,125 - 53,125 gallon setting)
   G. 2-inch Std Range (1,250 - 21,250 gallon setting)
   H. 2-inch Ext Range (6,250 - 106,250 gallon setting)
   I. 3-inch Std Range (3,750 - 63,750 gallon setting)
   J. 3-inch Ext Range (18,750 - 318,750 gallon setting)
   K. Electronic _____ Pulse Count ____ Meter Size __________
4. **System Type:**
   A. System #4: 1 Tank, 1 Meter, Immediate, or Delayed Regeneration
   B. System #4: Time Clock
   C. System #4: Twin Tank
   D. System #5: 2-5 Tanks, Interlock Mechanical
   2-4 Tanks, Interlock Electronic
   Meter per unit for Mechanical and Electronic
   E. System #6: 2-5 Tanks, 1 Meter, Series Regeneration, Mechanical
   2-4 Tanks, 1 Meter, Series Regeneration, Electronic
   F. System #7: 2-5 Tanks, 1 Meter, Alternating Regeneration, Mechanical
   2 Tanks only, 1 Meter, Alternating Regeneration, Electronic
   G. System #9: Electronic Only, 2-4 Tanks, Meter per Valve, Alternating
   H. System #14: Electronic Only, 2-4 Tanks, Meter per Valve. Brings units on and offline based on flow.
5. **Timer Program Settings:**
   A. Backwash: __________ Minutes
   B. Brine and Slow Rinse: __________ Minutes
   C. Rapid Rinse: __________ Minutes
   D. Brine Tank Refill: __________ Minutes
   E. Pause Time: __________ Minutes
   F. Second Backwash: __________ Minutes
6. **Drain Line Flow Control:** **gpm**
7. **Brine Line Flow Controller:** **gpm**
8. **Injector Size#:**
9. **Piston Type:**
   A. Hard Water Bypass
   B. No Hard Water Bypass

INSTALLATION

Water Pressure

A minimum of 20 pounds (1.4 bar) of water pressure is required for regeneration valve to operate effectively.

Electrical Facilities

An uninterrupted alternating current (A/C) supply is required.

NOTE: Note: sure your voltage supply is compatible with your unit before installation.

Existing Plumbing

Condition of existing plumbing should be free from lime and iron buildup. Piping that is built up heavily with lime and/ or iron should be replaced. If piping is clogged with iron, a separate iron filter unit should be installed ahead of the water softener.

Location Of Softener And Drain

The softener should be located close to a drain to prevent air breaks and back flow.

Bypass Valves

Always provide for the installation of a bypass valve if unit is not equipped with one.

CAUTION Water pressure is not to exceed 125 psi (8.6 bar), water temperature is not to exceed 110°F (43°C), and the unit cannot be subjected to freezing conditions.

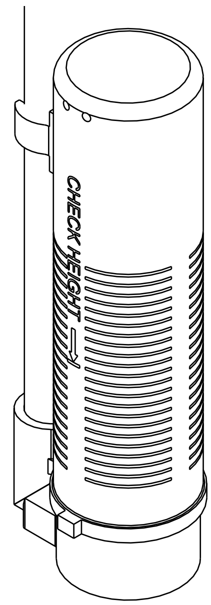
Installation Instructions

1. Place the softener tank where you want to install the unit making sure the unit is level and on a firm base.
2. During cold weather, the installer should warm the valve to room temperature before operating.
3. All plumbing should be done in accordance with local plumbing codes. The pipe size for residential drain line should be a minimum of 1/2 inch (13 mm). Backwash flow rates in excess of 7 gpm (26.5 Lpm) or length in excess of 20 feet (6 m) require 3/4 inch (19 mm) drain line. Commercial drain lines should be the same size as the drain line flow control.
4. Refer to the dimensional drawing for cutting height of the distributor tube. If there is no dimensional drawing, cut the distributor tube flush with the top of the tank.
5. Lubricate the distributor o-ring seal and tank o-ring seal. Place the main control valve on tank.

NOTE: Only use silicone lubricant.

6. Solder joints near the drain must be done prior to connecting the Drain Line Flow Control fitting (DLFC). Leave at least 6 inches (15 cm) between the DLFC and solder joints when soldering pipes that are connected on the DLFC. Failure to do this could cause interior damage to the DLFC.
7. Plumber tape is the only sealant to be used on the drain fitting. The drain from twin tank units may be run through a common line.
8. Make sure that the floor is clean beneath the salt storage tank and that it is level.
9. Place approximately 1 inch (25 mm) of water above the grid plate. If a grid is not utilized, fill to the top of the air check (Figure 1) in the salt tank. Do not add salt to the brine tank at this time.
10. On units with a bypass, place in bypass position. Turn on the main water supply. Open a cold soft water tap nearby and let run a few minutes or until the system is free from foreign material (usually solder) that may have resulted from the installation. Once clean, close the water tap.
11. Slowly place the bypass in service position and let water flow into the mineral tank. When water flow stops, slowly open a cold water tap nearby and let run until the air is purged from the unit.
12. Plug unit into an electrical outlet.

NOTE: All electrical connections must be connected according to local codes. Be certain the outlet is uninterrupted.



60002 Rev E

Figure 1 Residential Air Check Valve

START-UP INSTRUCTIONS

The water softener should be installed with the inlet, outlet, and drain connections made in accordance with the manufacturer's recommendations, and to meet applicable plumbing codes.

1. Turn the manual regeneraton knob slowly in a clockwise direction until the program micro switch lifts on top of the first set of pins. Allow the drive motor to move the piston to the first regeneration step and stop. Each time the program switch position changes, the valve will advance to the next regeneration step. Always allow the motor to stop before moving to the next set of pins or spaces.

NOTE: For electronic valves, please refer to the manual regeneration part of the timer operation section. If the valve came with a separate electronic timer service manual, refer to the timer operation section of the electronic timer service manual.

2. Position the valve to backwash. Ensure the drain line flow remains steady for 10 minutes or until the water runs clear (see above).
3. Position the valve to the brine / slow rinse position. Ensure the unit is drawing water from the brine tank (this step may need to be repeated).
4. Position the valve to the rapid rinse position. Check the drain line flow, and run for 5 minutes or until the water runs clear.

STARTUP INSTRUCTIONS *CONTINUED*

5. Position the valve to the start of the brine tank fill cycle. Ensure water goes into the brine tank at the desired rate. The brine valve drive cam will hold the valve in this position to fill the brine tank for the first regeneration.
6. Replace control box cover.
7. Put salt in the brine tank.

NOTE: Do not use granulated or rock salt.

3200 TIMER SETTING PROCEDURE

How To Set Days On Which Water Conditioner Is To Regenerate (Figure 2)

Rotate the skipper wheel until the number "1" is at the red pointer. Set the days that regeneration is to occur by sliding tabs on the skipper wheel outward to expose trip fingers. Each tab is one day. Finger at red pointer is tonight. Moving clockwise from the red pointer, extend or retract fingers to obtain the desired regeneration schedule.

How To Set The Time Of Day

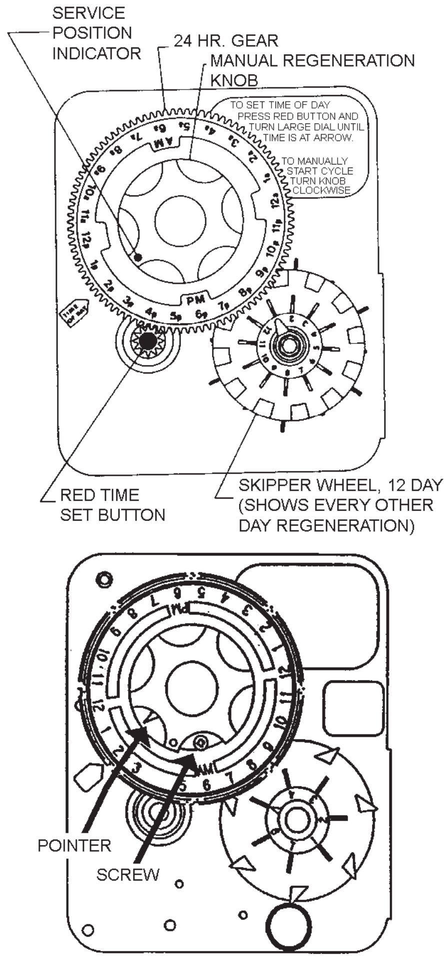
1. Press and hold the red button in to disengage the drive gear.
2. Turn the large gear until the actual time of day is at the time of day pointer.
3. Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

1. Turn the manual regeneration knob clockwise.
2. This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.
3. The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.
4. Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one half of this time.
5. In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

How to Adjust Regeneration Time

1. Disconnect the power source.
2. Locate the three screws behind the manual regeneration knob by pushing the red button in and rotating the 24-hour dial until each screw appears in the cut out portion of the manual regeneration knob.
3. Loosen each screw slightly to release the pressure on the time plate from the 24-hour gear.
4. Locate the regeneration time pointer on the inside of the 24-hour dial in the cut out.
5. Turn the time plate so the desired regeneration time aligns next to the raised arrow.
6. Push the red button in and rotate the 24-hour dial. Tighten each of the three screws.
7. Push the red button and locate the pointer one more time to ensure the desired regeneration time is correct.
8. Reset the time of day and restore power to the unit.



3200 ADJUSTABLE REGENERATION TIMER

IMPORTANT!
SALT LEVEL MUST ALWAYS BE ABOVE WATER LEVEL IN BRINE TANK

61502-3200 Rev A

Figure 2

3210 TIMER SETTING PROCEDURE

Typical Programming Procedure

Calculate the gallon capacity of the system, subtract the necessary reserve requirement and set the gallons available opposite the small white dot on the program wheel gear (Figure 3).

NOTE: Drawing shows 8,750 gallon setting. The capacity (gallons) arrow (15) shows zero gallons remaining. The unit will regenerate tonight at the set regeneration time.

How To Set The Time Of Day

1. Press and hold the red button in to disengage the drive gear.
2. Turn the large gear until the actual time of day is opposite the time of day pointer.
3. Release the red button to again engage the drive gear.

How To Manually Regenerate Your Water Conditioner At Any Time

1. Turn the manual regeneration knob clockwise.
2. This slight movement of the manual regeneration knob engages the program wheel and starts the regeneration program.

3210 TIMER SETTING PROCEDURE

CONTINUED

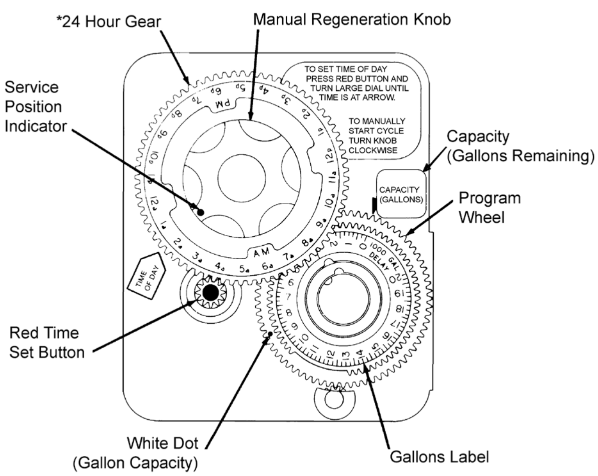
3. The black center knob will make one revolution in the following approximately three hours and stop in the position shown in the drawing.
4. Even though it takes three hours for this center knob to complete one revolution, the regeneration cycle of your unit might be set for only one half of this time.
5. In any event, conditioned water may be drawn after rinse water stops flowing from the water conditioner drain line.

Immediate Regeneration Timers

These timers do not have a 24-hour gear. Setting the gallons on the program wheel and manual regeneration procedure are the same as previous instructions. The timer will regenerate as soon as the capacity gallons reaches zero.

NOTE: The program wheel to the left may be different than the program wheel on the product.

NOTE: To set meter capacity rotate manual knob one - 360° revolution to set gallonage.



*Immediate regeneration timers do not have a 24-hour gear. No time of day can be set.

61502-3200 Rev A

Figure 3

3200, 3210, 3220, 3230 REGENERATION CYCLE SETTING PROCEDURE

How To Set The Regeneration Cycle Program

The regeneration cycle program on your water conditioner has been factory preset, however, portions of the cycle or program may be lengthened or shortened in time to suit local conditions.

3200 Series Timers (Figure 4)

1. To expose cycle program wheel, grasp timer in upper left-hand corner and pull, releasing snap retainer and swinging timer to the right.
2. To change the regeneration cycle program, the program wheel must be removed. Grasp program wheel and squeeze protruding lugs toward center, lift program wheel off timer. Switch arms may require movement to facilitate removal.
3. Return timer to closed position engaging snap retainer in back plate. Make certain all electrical wires locate above snap retainer post.

Timer Setting Procedure

How To Change The Length Of The Backwash Time

The program wheel as shown in the drawing is in the service position. As you look at the numbered side of the program wheel, the group of pins starting at zero determines the length of time your unit will backwash.

For example, if there are six pins in this section, the time of backwash will be 12 min. (2 min. per pin). To change the length of backwash time, add or remove pins as required. The number of pins times two equals the backwash time in minutes.

How To Change The Length Of Brine And Rinse Time

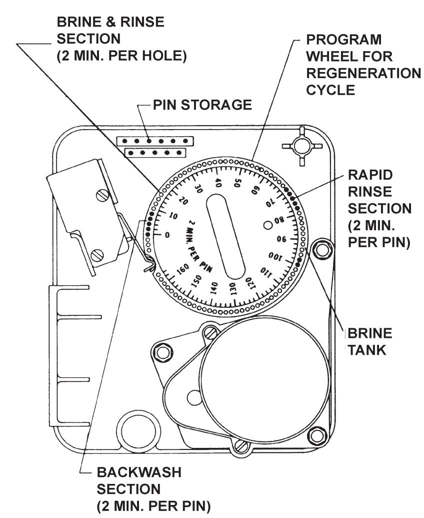
1. The group of holes between the last pin in the backwash section and the second group of pins determines the length of time that your unit will brine and rinse (2 min. per hole).
2. To change the length of brine and rinse time, move the rapid rinse group of pins to give more or fewer holes in the brine and rinse section. Number of holes times two equals brine and rinse time in minutes.

How To Change The Length Of Rapid Rinse

1. The second group of pins on the program wheel determines the length of time that your water conditioner will rapid rinse (2 min. per pin).
2. To change the length of rapid rinse time, add or remove pins at the higher numbered end of this section as required. The number of pins times two equals the rapid rinse time in minutes.

How To Change The Length Of Brine Tank Refill Time

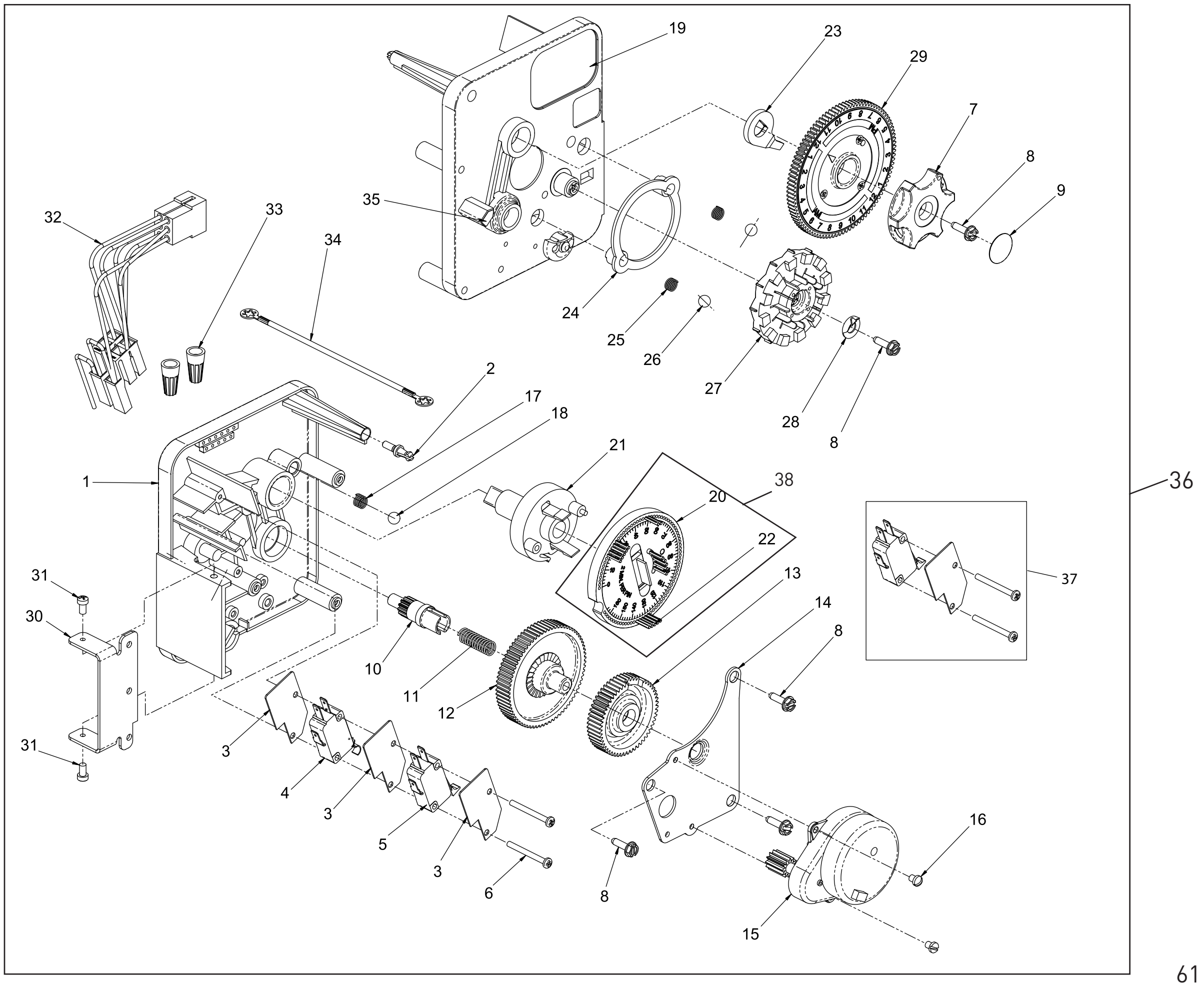
1. The second group of holes in the program wheel determines the length of time that your water conditioner will refill the brine tank (2 min. per hole).
2. To change the length of refill time, move the two pins at the end of the second group of holes as required.
3. The regeneration cycle is complete when the outer microswitch is tripped by the two pin set at end of the brine tank refill section.
4. The program wheel, however, will continue to rotate until the inner micro switch drops into the notch on the program wheel.



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Figure 4

3200 TIME CLOCK TIMER ASSEMBLY



61502-3200 Rev A

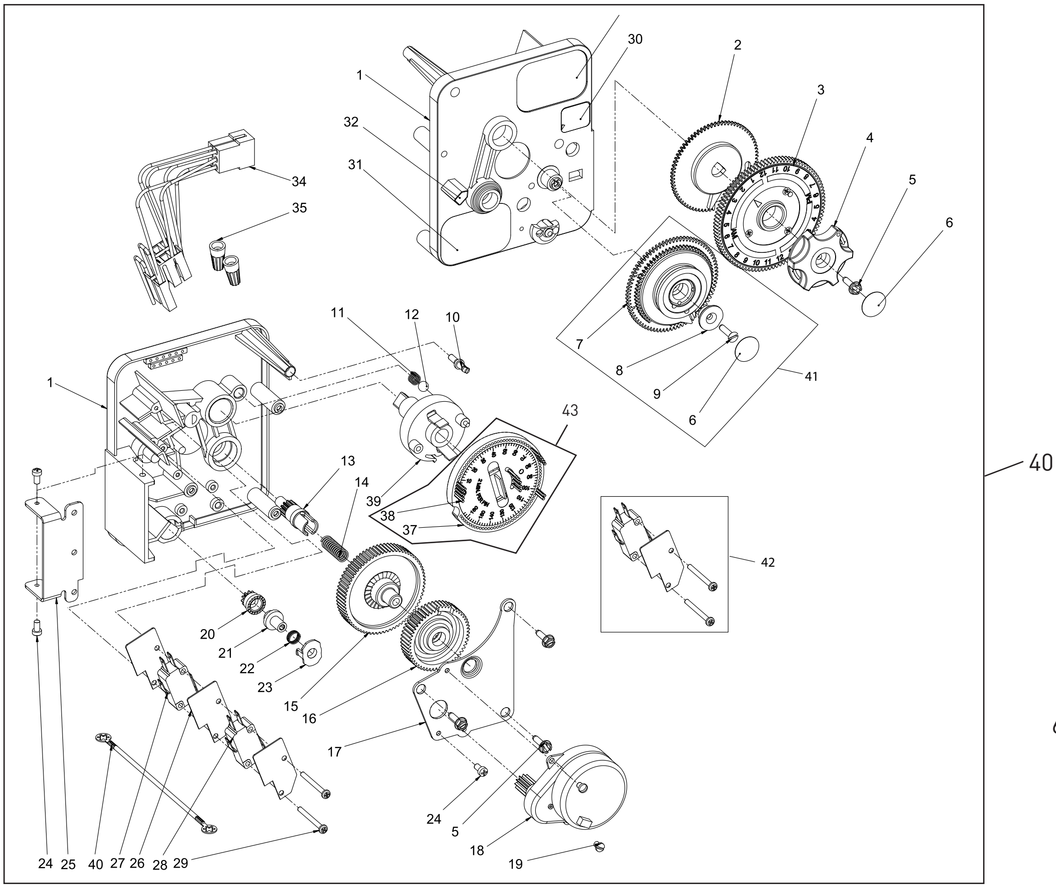
3200 TIME CLOCK TIMER ASSEMBLY

CONTINUED

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer, 3200
2	1	14265	Clip, Sping
3	3	14087	Insulator
4	1	10896	Switch, Micro
5	1	15320	Switch, Micro, Timer
6	2	11413	Screw, Pan Hd Mach, 4-40 x 1-1/8
7	1	13886	Knob, 3200
8	5	13296	Screw, Hex Wsh, 6-20 x 1/2
9	1	11999	Label, Button
10	1	13018	Pinion, Idler
11	1	13312	Spring, Idler Shaft
12	1	13017	Gear, Idler
13	1	13164	Gear, Drive
14	1	13887	Plate, Motor Mounting
15	1	18743-1	Motor, 120V, 60Hz, 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 230V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
16	2	13278	Screw, Sltd Fillister Hd 6-32 x .156
17	1	15424	Spring, Detent, Timer
18	1	15066	Ball, 1/4-inch, Delrin
19	1	15465	Label, Caution
20	1	19210	Program Wheel Assy
21	1	13911	Gear, Main Drive, Timer
22	17	41754	Pin, Spring, 1/16 x 5/8 SS, Timer
23	1	13011	Arm, Cycle Actuator
24	1	13864	Ring, Skipper Wheel
25	2	13311	Spring, Detent, Timer
26	2	13300	Ball, 1/4-inch, SS
27	1	14381	Skipper Wheel Assy, 12 Day
		14860	Skipper Wheel Assy, 7 Day
28	1	13014	Pointer, Regeneration
29	1	40096-24	Dial, 12 AM Regen Assy, Black
		40096-02	Dial, 2 AM Regen Assy, Black
30	1	13881	Bracket, Hinger Timer
31	2	11384	Screw, Phil, 6-32 x 1/4 Zinc
32	1	13902	Harness, 3200
33	2	40422	Nut, Wire, Tan
34	1	15354-01	Wire, Ground, 4 inches
35	1	14007	Label, Time of Day
36	1	*	Complete 3200 Time Clock Timer Assembly
37		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
38		61420-03	Program Wheel, Gear Assy, Filter 2 Min Per Pin
		61420-04	Program Wheel, Gear Assy, Softener, 2 Min Per Pin
		61420-06	Program Wheel, Gear Assy, Soft Immed, 2 Min Per Pin
		61420-42	Program Wheel, Gear Assy, Filter Immed, 2 Min Per Pin

*Call your distributor for Part Number

3210 METER DELAYED TIMER ASSEMBLY



61502-3210 Rev A

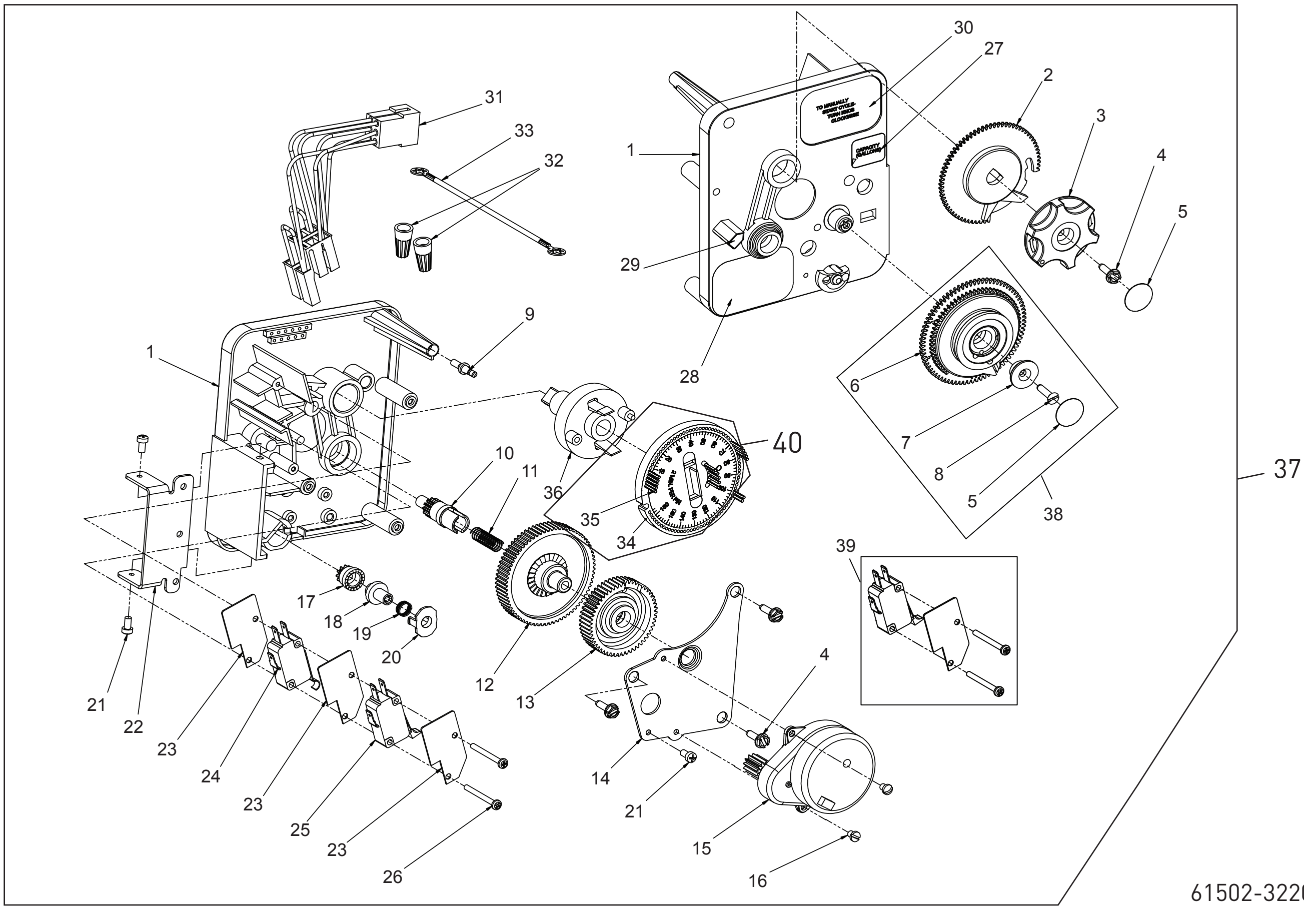
3210 METER DELAYED TIMER ASSEMBLY

CONTINUED

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer, 3200
2	1	13802	Gear, Cycle Actuator
3	1	40096-02	Dial 2 AM Regen Assy, Black
4	1	13886	Knob, 3200
5	4	13296	Screw, Hex Wsh, 6-20 x 1/2
6	2	11999	Label, Button
7	1	13803	Gear, Program Drive Wheel
8	1	13806	Retainer, Program Wheel
9	1	13748	Screw, Flat Head St, 6-20 x 1/2
10	1	14265	Clip, Spring
11	1	15424	Spring, Detent, Timer
12	1	15066	Ball, 1/4-inch Delrin
13	1	13018	Pinion, Idler
14	1	13312	Spring, Idler Shaft
15	1	13017	Gear, Idler
16	1	13164	Gear, Drive
17	1	13887	Plate, Motor Mounting
18	1	18743-1	Motor, 120V, 60Hz 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 230V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
19	1	13278	Screw, Fillister Hd, 6-32 x .156
20	1	13830	Pinion, Program Wheel Drive
21	1	13831	Clutch, Drive Pinion
22	1	14276	Spring, Meter, Clutch
23	1	14253	Retainer, Clutch Spring
24	3	11384	Screw, Phil, 6-32 x 1/4
25	1	13881	Bracket, Hinge Timer
26	3	14087	Insulator
27	1	10896	Switch, Micro
28	1	15320	Switch, Micro, Timer
29	2	11413	Screw, Pan Hd Mach, 4-40 x 1 1/8
30	1	14198	Label, Indicator
31	1	15465	Label, Caution
32	1	14007	Label, Time of Day
33	1	14045	Label, Instruction
34	1	13902	Harness, 3200
35	2	40422	Nut, Wire, Tan
36	1	15354-01	Wire, Ground, 4 inches
37	1	19210	Program Wheel Assy
38	17	41754	Pin, Spring, 1/16 x 5/8 SS, Timer
39	1	13911	Gear, Main Drive, Timer
40	1	*	Complete 3210 Meter Delayed Timer Assembly
41		60405-10	Program Wheel, w/3/4-inch STD Label 0-2,100 gal
		60405-20	Program Wheel, w/3/4-inch EXT Label 0-10,000 gal
		60405-11	Program Wheel, w/3/4-inch STD Metric Label 0-8 m3
		60405-21	Program Wheel, w/3/4-inch EXT Range 0-40 m3
		60405-30	Program Wheel, w/1-inch STD Range Label, 0-5,270
		60405-40	Program Wheel, w/1-inch EXT Range Label 0-26,350
42		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
43		61420-03	Program Wheel, Gear Assy, Filter 2 Min Per Pin
		61420-04	Program Wheel, Gear Assy, Softener, 2 Min Per Pin
		61420-06	Program Wheel, Gear Assy, Soft Immed, 2 Min Per Pin
		61420-42	Program Wheel, Gear Assy, Filter Immed, 2 Min Per Pin

*Call your distributor for Part Number

3220 METER IMMEDIATE TIMER ASSEMBLY



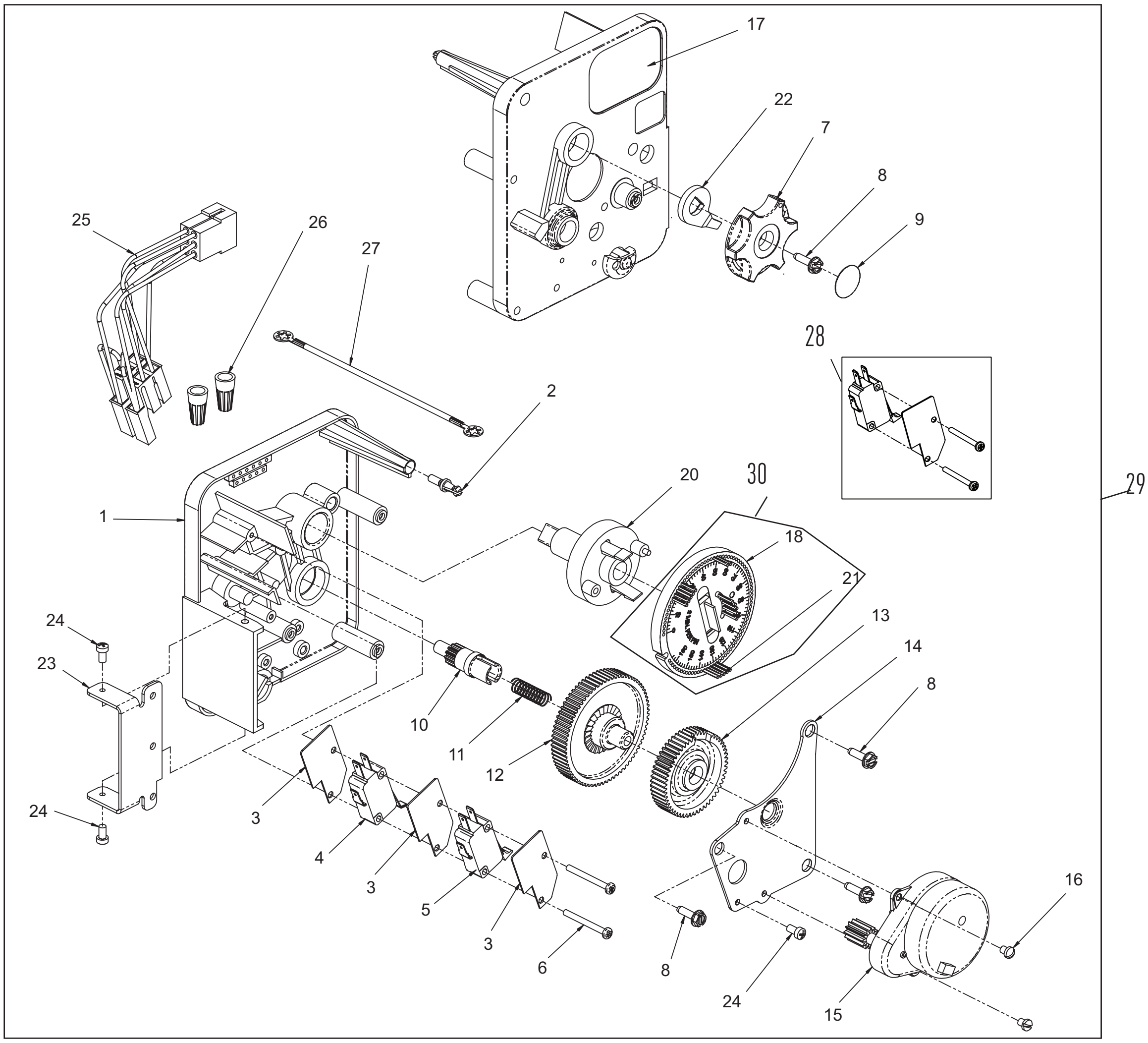
61502-3220 Rev B

3220 METER IMMEDIATE TIMER ASSEMBLY *CONTINUED*

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer
2	1	15431	Gear, Cycle Actuator, System #5
3	1	13886	Knob, 3200
4	4	13296	Screw, Hex Wsh, 6-20 x 1/2
5	2	11999	Label, Button
6	1	13807	Gear, Program Drive Wheel
7	1	13806	Retainer, Program Wheel
8	1	13748	Screw, Flt Hd St, 6-20 x 1/2
9	1	14265	Spring Clip
10	1	13018	Pinion, Idler
11	1	18563	Idler Shaft Spring
12	1	13017	Gear, Idler
13	1	13164	Drive Gear
14	1	13887	Plate, Motor Mounting
15	1	18743-1	Motor, 120V, 60 Hz, 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 230V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
16	2	13278	Screw, Sltd Fillister Hd
17	1	14502	Pinion, Program Wheel
18	1	14501	Clutch, Drive Pinion
19	1	14276	Meter Clutch Spring
20	1	14253	Retainer, Clutch Spring
21	3	11384	Screw, Phil, 6-32 x 1/4 Zinc
22	1	13881	Bracket, Hinge Timer
23	3	14087	Insulator
24	1	15414-00	Micro Switch
25	1	15320	Switch, Micro, Timer
26	2	11413	Screw, Pan Hd Mach, 4-40 x 1-1/8
27	1	14198	Label, Indicator
28	1	15465	Label, Caution
29	1	14007	Label, Time of Day
30	1	15148	Label, Instruction
31	1	40617	Harness, 3220
32	2	40422	Nut, Wire, Tan
33	1	15354-01	Wire, Ground, 4 inches
34	1	19210-05	Program Wheel Assembly, 9000/3230
35	17	41754	Pin, Spring, 1/16 x 5/8 Stainless Steel, Timer
36	1	15055	Gear, Main Drive
37	1	*	Complete 3220 Meter Immediate Timer Assy
38		60405-10	Program Wheel, w/3/4-inch STD Label 0-2,100 gal
		60405-20	Program Wheel, w/3/4-inch EXT Label 0-10,000 gal
		60405-11	Program Wheel, w/3/4-inch STD Metric Label 0-8 m^3
		60405-21	Program Wheel, w/3/4-inch EXT Range 0-40 m^3
39		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
40		61420-06	Program Wheel, Gear Assy, Softener Immediate 2 Min Per Pin
		61420-42	Program Wheel, Gear Assy, Filter Immediate 2 Min Per Pin

*Call your distributor for Part Number

3230 REMOTE START TIMER ASSEMBLY



61502-3230R REV A

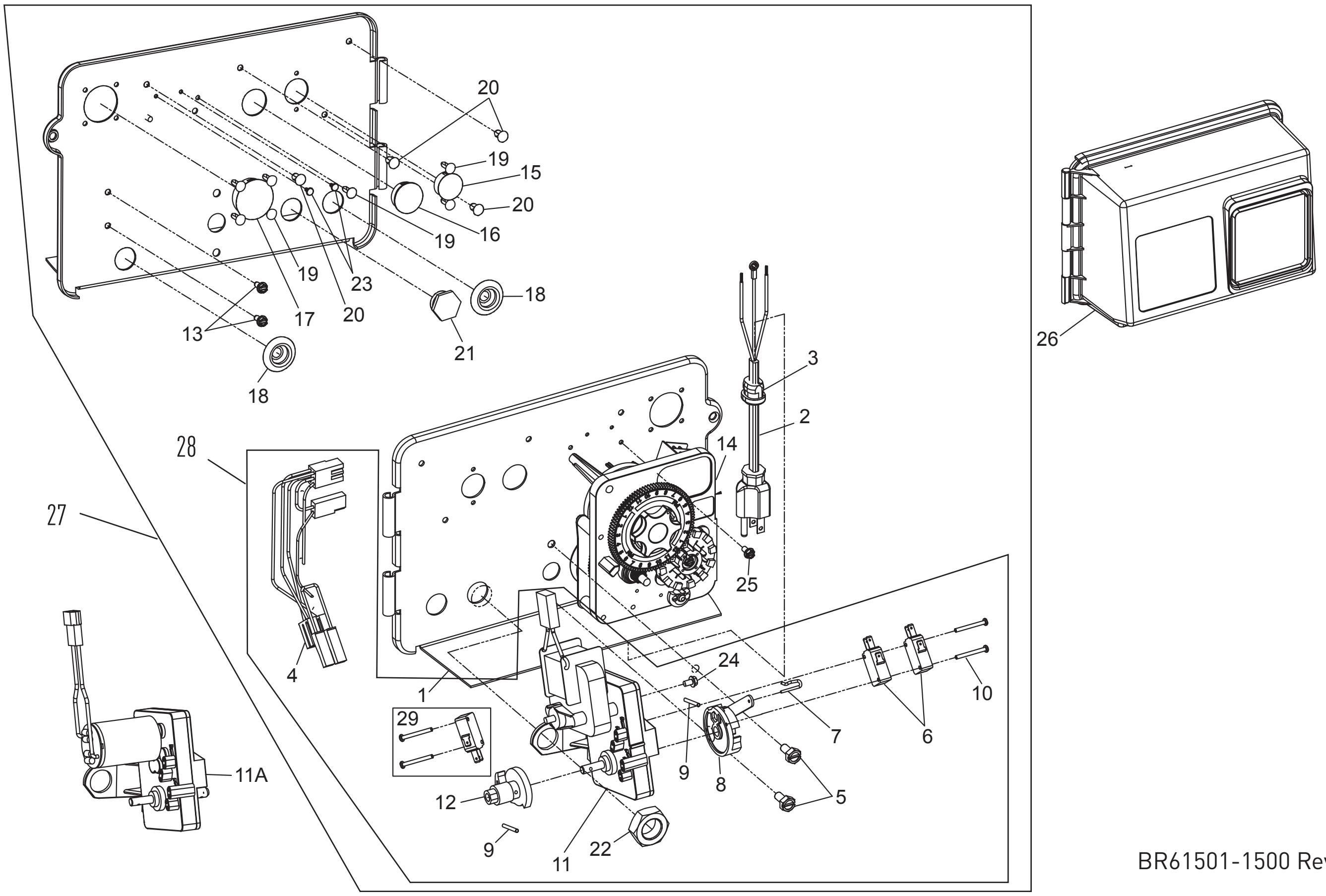
3230 REMOTE START TIMER ASSEMBLY

CONTINUED

Item No.	QTY	Part No.	Description
1	1	13870	Housing, Timer
2	1	14265	Spring Clip
3	3	14087	Insulator
4	1	15314	Micro Switch
5	1	15320	Switch, Micro, Timer
6	2	11413	Screw, Pan Hd Mach, 4-40 x 1-1/8
7	1	13886	Knob, 3200
8	4	13296	Screw, Hex Wsh, 6-20 x 1/2
9	1	11999	Label, Button
10	1	13018	Pinion, Idler
11	1	18563	Idler Shaft Spring
12	1	13017	Gear, Idler
13	1	15055	Drive Gear
14	1	13887	Plate, Motor Mounting
15	1	18743-1	Motor, 120V, 60 Hz, 1/30 RPM
		18752-1	Motor, 100V, 50Hz, 1/30 RPM
		18824-1	Motor, 23V, 50Hz, 1/30 RPM
		18826-1	Motor, 24V, 50Hz, 1/30 RPM
		19659-1	Motor, 24V, 60Hz, 1/30 RPM
		19660-1	Motor, 230V, 60Hz, 1/30 RPM
16	2	13278	Screw, Sltd Fillister Hd
17	1	15313	Label, Caution
18	1	19210-05	Program Wheel Assembly, 3200
20	1	15055	Main Drive Gear
21	17	41754	Pin, Spring, 1/16 x 5/8 Stainless Steel, Timer
22	1	13011	Cycle Actuator Arm
23	1	13881	Bracket, Hinge Timer
24	3	11384	Screw, Phil, 6-32 x 1/4 Zinc
25	1	16336	Harness, 3230R
26	2	40422	Nut, Wire, Tan
27	1	15354-01	Wire, Ground, 4 inches
28		60320-02	Switch Kit, 3200/9000 Timer Auxiliary, Optional
29		*	3230 Timer Assy
30		61420-06	Program Wheel, Gear Assy, Softener Immediate 2 Min Per Pin
		61420-42	Program Wheel, Gear Assy, Filter Immediate 2 Min Per Pin

*Call your distributor for Part Number

POWERHEAD ASSEMBLY (ENVIRONMENTAL)



BR61501-1500 Rev C

POWERHEAD ASSEMBLY (ENVIRONMENTAL) *CONTINUED*

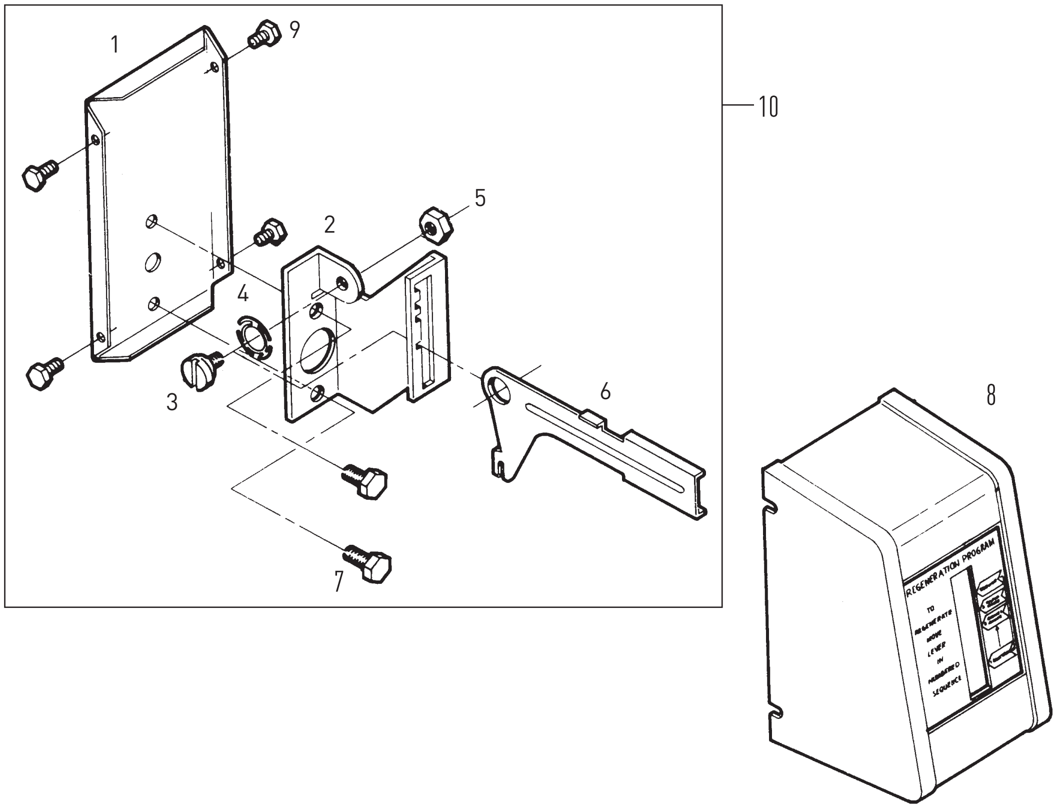
Item No.	QTY	Part No.	Description
1	1	18697-15	Backplate, Hinged
2	1	11838	Power Cord, 6-foot, North American, Flat
		19303-01	Power Cord, 6-foot, Austrailian
		19885-01	Power Cord, 6-foot, Japanese
		11545-01	Power Cord, 6-foot, European
3	1	13547	Strain Relief, Cord
4	1	40400	Harness, Drive Designr/ Envirmtl
5	2	10231	Screw, Slot Hex 1/4-20 x 1/2 35 in-lbs ±20%
6	2	10218	Switch, Micro
7	1	10909	Pin, Connecting Rod Spring
8	1	60160-15	Drive Cam Assy, STF, Blue, 2900
9	2	10338	Pin, Roll, 3/32 x 7/8
10	2	14923	Screw, Pan Hd MACH, 4-40 x 1 5.0 in-lbs ±10%
11	1	41543	Motor, Drive, 115V/60 Hz
		41545	Motor, Drive, 220V, 50-60Hz, SP, Fam 1
11A		42579	Motor, Drive, 24 VAC/DC, 50-60 Hz, Fam 1
12	1	12777	Cam, Shut-off Valve
13	2	10300	Screw, Hx Wash Head, 8 x 3/8 20 in-lbs ±20%
14	1	3200	Timer Assy, 3200 7 or 12 Day
			3210 Meter Delay
			3220 Meter Immediate
15	1	15806	Hole Plug, (HeyCo)
16	1	16493	Plug, Hole, HeyCo, .88 Dia
17	1	17421	Plug, 1.20 Hole
18	2	19691	Plug, .750 Dia. Hole, Flush
19	7	19800	Plug (Hole Size: Dia .140)
20	4	19801	Plug, Dia .190
21	1	43560	Fitting, Brine Valve (Used on Filter Valves)
22	1	10269	Nut, Jam, 3/4-16 (Used on FIlter Valves) Wrench Tighten
23	2	41581	Plug, Hole .125 Dia, White
24	1	10872	Screw, Hex WSH, 8-32 x 5/16 20 in-lbs ±20%
25	1	14202-01	Screw, Hex Washer #8-32 x 5/16 Hand Tighten
26	1	60219-02	Cover Assy, Environmental, Black, Clear Window
		60219-12	Cover Assy, Environmental, Black, Black Window
27	1	*	Powerhead Assembly
28	1	60050-23	Drive Motor Assy, 24 VAC/DC, 50-60 Hz FAM 1
		60050-21	Drive Motor Assy, 115V/60 Hz
		60050-22	Drive Motor Assy, 220V, 50-60 Hz SP FAM1
29		60320-12	Switch Kit, 1500-2850 Drive Motor

Not Shown:

	1	17470	Cable Guide Assy, 2850
	1	17741	Meter Cable, 16.50 inches

*Call your distributor for Part Number

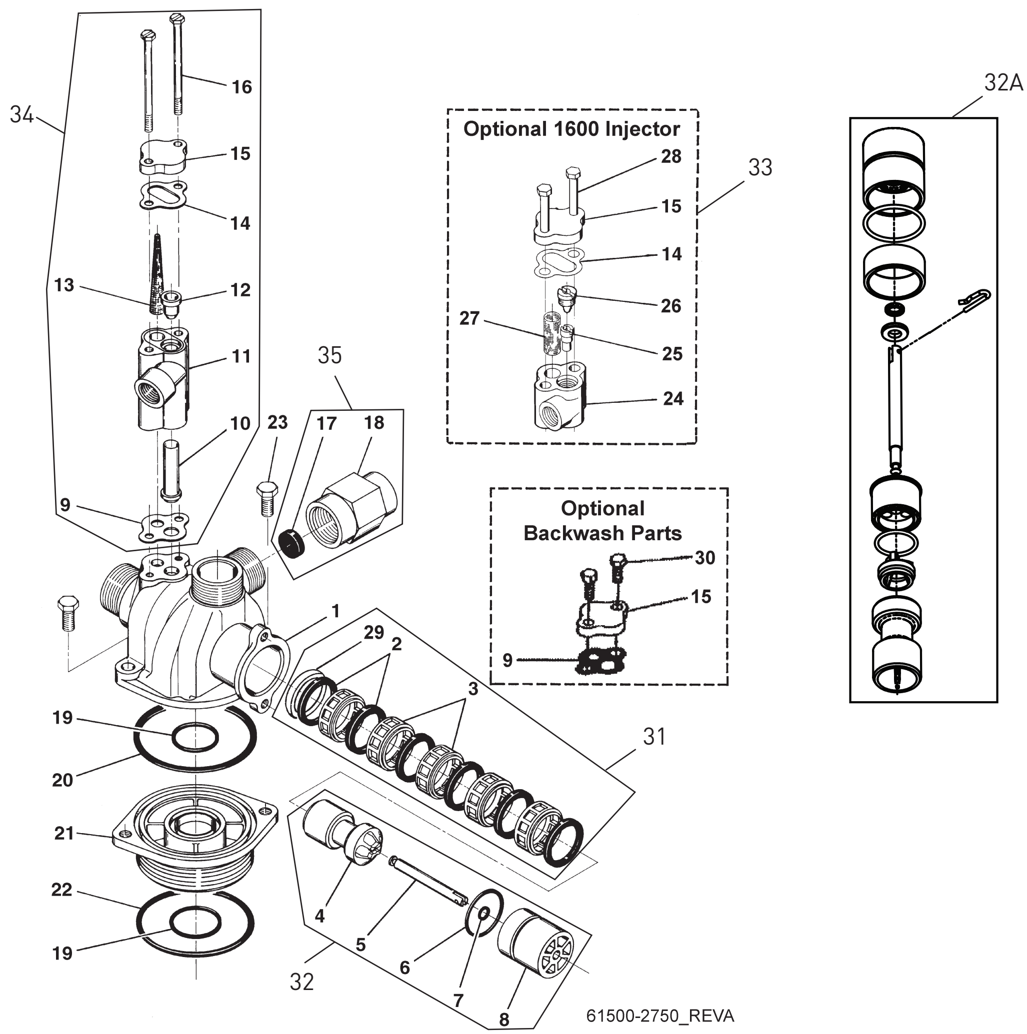
MANUAL POWERHEAD ASSEMBLY



60409 Rev A

Item No.	QTY	Part No.	Description
1	1	12593	Backplate, Manual
2	1	12592	Bracket, Lever Position
3	1	12596	Screw, Spec Mach, 1/4 - 20 x 1/2
4	1	12707	Washer, Spring
5	1	11235	Nut, Hex, 1/4 - 20, Mach Screw, Zinc
6	1	12594	Lever, Valve Position
7	2	10231	Screw, Slot Hex, 1/4 - 20 x 1/2 18-8 SS
8	1	60224-32	Cover Assy, Manual, Filter
		60224-33	Cover Assy, Manual, Softener
9	4	10300	Screw, Slot Hex Wsh, 8-18 x 3/8 Type “B” RC44-47
10		60409	Powerhead Assy, Manual
Not Shown:			
	1	10909	Pin, Link

CONTROL VALVE WITH 1700 INJECTOR ASSEMBLY



60036 Rev C

CONTROL VALVE WITH 1700 INJECTOR

CONTINUED

Item No.	QTY	Part No.	Description
1	1	14749	Valve Body, 2750
2	6	10545	Seal, Piston
3	5	11451	Spacer, 12 Hole
		16589	Spacer, HW
4	1	14451	Piston, 2750
5	1	14452	Rod, Piston
6	1	10234-01	O-Ring, -024, 560CD
7	1	10209	Quad Ring, -010
8	1	10598	End Plug Assembly
		10598-01	End Plug Assembly, Hot Water
9	1	14805	Gasket, Injector Body, 1600/1700
10		14802-03C	Throat, Injector, #3C, Yellow
		14802-04C	Throat, Injector, #4C, Green
		14802-05C	Throat, Injector, #5C, White
		14802-06C	Throat, Injector, #6C, Red
11	1	17777	Body, Injector, 1700
12		14801-03C	Nozzle, Injector, #3C, Yellow
		14801-04C	Nozzle, Injector, #4C, Green
		14801-05C	Nozzle, Injector, #5C, White
		14801-06C	Nozzle, Injector, #6C, Red
13	1	14803	Screen, Injector
14	1	10229	Gasket, Injector Cap, 1600
15	1	11893	Cap, Injector, Stainless Steel
		10228	Cap, Injector, Brass
16	2	14804	Screw, Hex Hd Mach, 10-24 x 2-3/4
17	1		Washer - Flow Control (specify size)
18	1	60365-00	Housing, DLFC, 1/2-inch F x 3/4-inch F, Blank
19	2	11710	O-ring, -215
20	1	11208	O-ring, -232
21	1	12461-01	Adapter Base, 1-inch 2-1/2 inch - 8 Quick Connect
22	1	10381	O-ring, -231
23	2	11224	Screw, Hex Hd, 5/16 - 18 x 5/8
24	1	17776	Body, Injector
25		10914-000	Throat, Injector #000, Brown
		10914-00	Throat, Injector, #00, Violet
		10914-0	Throat, Injector, #0, Red
		10914-1	Throat, Injector, #1, White
		10914-2	Throat, Injector, #2, Blue
		10914-3	Throat, Injector, #3, Yellow
		10914-4	Throat, Injector, #4, Green
		12974-0	Throat, Injector, #0, PVC, Grey
		12974-1	Throat, Injector, #1, PVC, Grey
		12974-2	Throat, Injector, #2, PVC, Grey
		12974-3	Throat, Injector, #3, PVC, Grey
		12974-4	Throat, Injector, #4, PVC, Grey
		10226-0	Throat, Injector, #0, Stainless Steel
		10226-1	Throat, Injector, #1, Stainless Steel
		10226-2	Throat, Injector, #2, Stainless Steel
		10226-3	Throat, Injector, #3, Stainless Steel
		10226-4	Throat, Injector, #4, Stainless Steel
26	1	10913-000	Nozzle, Injector #000, Brown
		10913-00	Nozzle, Injector #00, Violet
		10913-0	Nozzle, Injector #0, Red
		10913-1	Nozzle, Injector #1, White
		10913-2	Nozzle, Injector #2, Blue
		10913-3	Nozzle, Injector #3, Yellow
		10913-4	Nozzle, Injector #4, Green
		12973-0	Nozzle, Injector #0, PVC, Grey
		12973-1	Nozzle, Injector #1, PVC, Grey
		12973-2	Nozzle, Injector #2, PVC, Grey
		12973-3	Nozzle, Injector #3, PVC, Grey
		12973-4	Nozzle, Injector #4, PVC, Grey
		10225-0	Nozzle, Injector #0, Stainless Steel
		10225-1	Nozzle, Injector #1, Stainless Steel
		10225-2	Nozzle, Injector #2, Stainless Steel
		10225-3	Nozzle, Injector #3, Stainless Steel
		10225-4	Nozzle, Injector #4, Stainless Steel
27	1	10227	Screen, Injector

CONTROL VALVE WITH 1700 INJECTOR

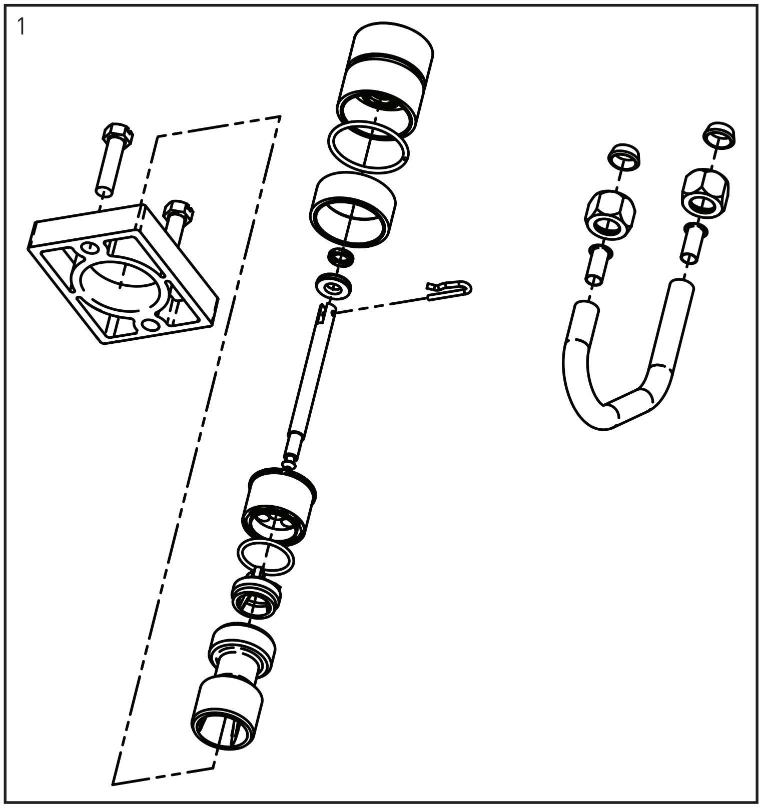
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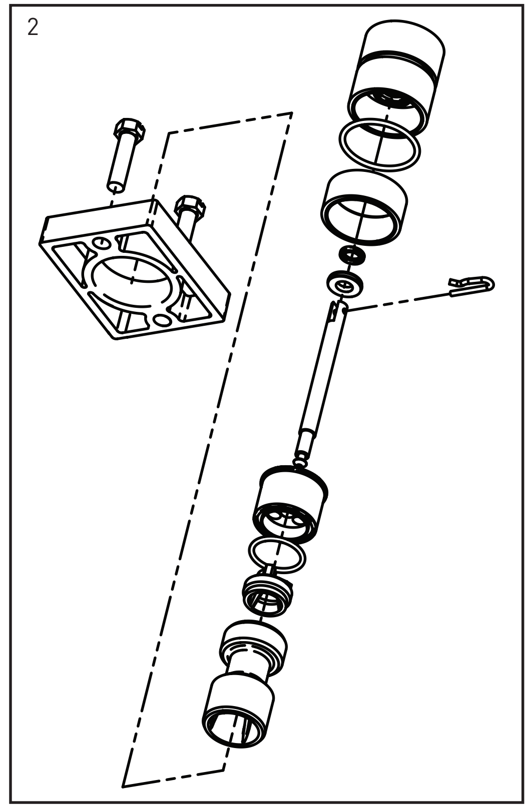
Item No.	QTY	Part No.	Description
28	2	10692	Screw, Slot Hex Hd, 10-24 x 18-8 Stainless Steel
29	1	10757	Spacer, End
		10757B	Spacer, End, Brass
30	1	15137	Screw, Hex Wsh Mach, 10-24 x 3/8
31	1	60121	Seal Kit, 1500, 2510, 2750
32	1	60090-HF	Piston Assy, 2750
32A	1	60101-01	Piston Assy, NHWBP, DF 1500, 2510, 2750
33	1	60480-000	Injector Assy, 1600 #00, Plastic
		60480-00	Injector Assy, 1600 #0, Plastic
		60480-01	Injector Assy, 1600 #1, Plastic
		60480-02	Injector Assy, 1600 #2, Plastic
		60480-03	Injector Assy, 1600 #3, Plastic
		60480-04	Injector Assy, 1600 #4, Plastic
		60481-21	Injector Assy, 1600, #1, S.S. Complete, Brass
		60481-22	Injector Assy, 1600, #2, S.S. Complete, Brass
		60481-23	Injector Assy, 1600, #3, S.S. Complete, Brass
		60080-11	Injector Assy, 1600, #1, PVC
		60080-12	Injector Assy, 1600, #2, PVC
		60080-14	Injector Assy, 1600, #4, PVC
34	1	60381-03	Injector Assy, 1700, 3C
		60381-04	Injector Assy, 1700, 4C
		60381-05	Injector Assy, 1700, 5C
		60381-06	Injector Assy, 1700, 6C
35	1	60365-06	DLFC, 3/4-inch F x 1/2-inch F, NPT 0.6 gpm
		60365-08	DLFC, 3/4-inch F x 1/2-inch F, NPT 0.8 gpm
		60365-10	DLFC, 3/4-inch F x 1/2-inch F, NPT 1.0 gpm
		60365-12	DLFC, 3/4-inch F x 1/2-inch F, NPT 1.2 gpm
		60365-13	DLFC, 3/4-inch F x 1/2-inch F, NPT 1.3 gpm
		60365-15	DLFC, 3/4-inch F x 1/2-inch F, NPT 1.5 gpm
		60365-17	DLFC, 3/4-inch F x 1/2-inch F, NPT 1.7 gpm
		60365-20	DLFC, 3/4-inch F x 1/2-inch F, NPT 2.0 gpm
		60365-24	DLFC, 3/4-inch F x 1/2-inch F, NPT 2.4 gpm
		60365-30	DLFC, 3/4-inch F x 1/2-inch F, NPT 3.0 gpm
		60365-35	DLFC, 3/4-inch F x 1/2-inch F, NPT 3.5 gpm
		60365-40	DLFC, 3/4-inch F x 1/2-inch F, NPT 4.0 gpm
		60365-45	DLFC, 3/4-inch F x 1/2-inch F, NPT 4.5 gpm
		60365-50	DLFC, 3/4-inch F x 1/2-inch F, NPT 5.0 gpm
		60365-60	DLFC, 3/4-inch F x 1/2-inch F, NPT 6.0 gpm
		60365-70	DLFC, 3/4-inch F x 1/2-inch F, NPT 7.0 gpm
		60700-00	DLFC, 3/4-inch F x 3/4-inch F, NPT Blank
		60700-8.0	DLFC, 3/4-inch F x 3/4-inch F, NPT 8.0 gpm
		60700-9.0	DLFC, 3/4-inch F x 3/4-inch F, NPT 9.0 gpm
		60700-10	DLFC, 3/4-inch F x 3/4-inch F, NPT 10.0 gpm
		60700-12	DLFC, 3/4-inch F x 3/4-inch F, NPT 12.0 gpm
		60700-15	DLFC, 3/4-inch F x 3/4-inch F, NPT 15.0 gpm
		60700-20	DLFC, 3/4-inch F x 3/4-inch F, NPT 20.0 gpm
		60700-25	DLFC, 3/4-inch F x 3/4-inch F, NPT 25.0 gpm

Not Shown

Item No.	QTY	Part No.	Description
	1	16221	Disperser, Air, 1600
	1	17996	Disperser, Air, 1700

SOFTENER FILTER CONVERSION KITS



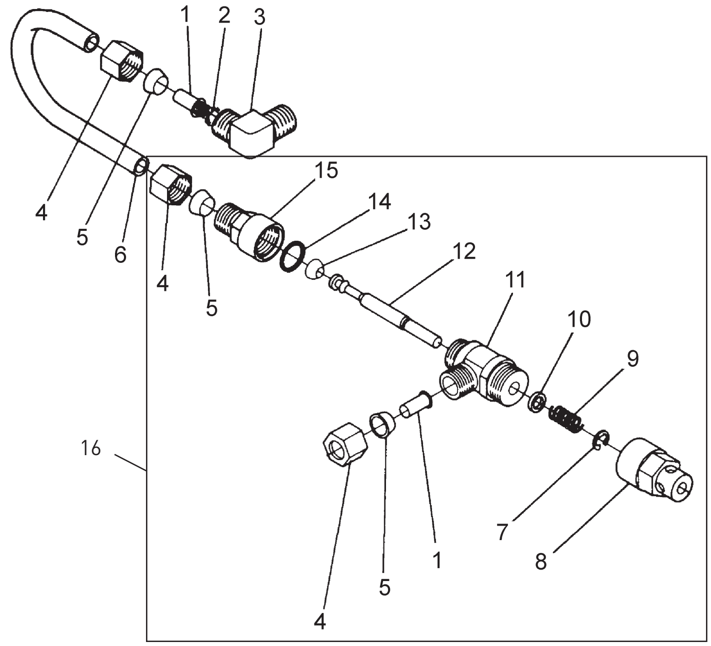


61671 Rev E

Item No.	QTY	Part No.	Description
1		60101-02	Piston Conversion, No Seals, No Spacers, NHWBP 1600, 1500, 2510, 2750
2		60101-00	Piston Kit, No Seals, No Spacers, NHWBP Filter 1500, 2510, 2750

NOTE: For optimal seal life, the use of lubricants is not recommended.

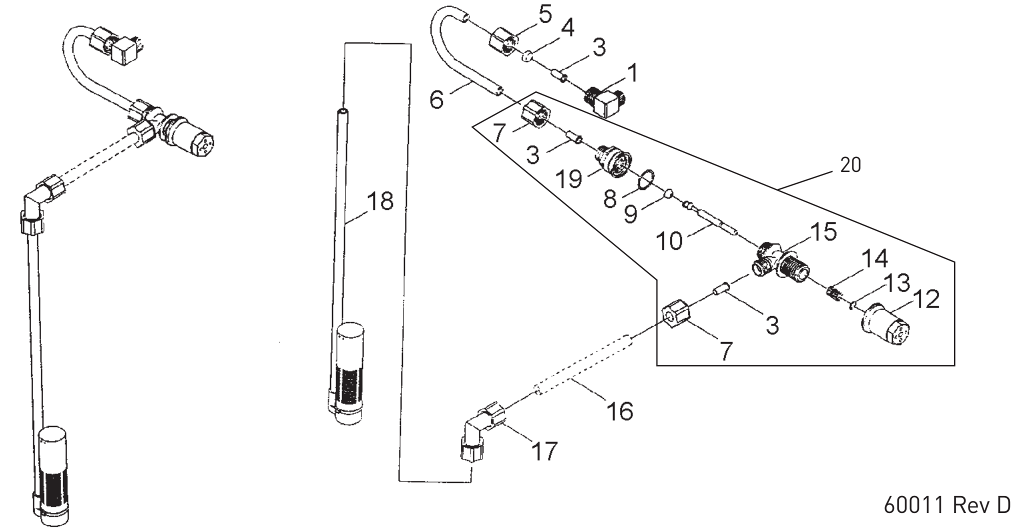
1600 BRINE SYSTEM ASSEMBLY



60029 Rev C

Item No.	QTY	Part No.	Description
1	2	10332	Fitting, Insert, 3/8
2	1	12767	Screen, Brine
3	1	10328	Fitting, Elbow, 90 Deg. 1/4-inch NPT x 3/8Tube
4	3	10329	Fitting, Tube, 3/8 Nut, Brass
5	3	10330	Fitting, Sleeve, 3/8 Celcon
6	1	16508-01	Tube, Brine Valve, 2850/2900s
		12774	Tube, Brine Valve, 1500
		40027	Tube, Brine Valve, 2510, HWBP
		14228	Tube, Brine Valve, 2510, NHWBP
		15221-01	Tube, Brine Valve, 2750/2900
		42184	Tube, Brine Valve, 2850s
		41683	Tube, Brine Valve, UF, 2900S 1600/1650
7	1	10250	Ring, Retaining
8	1	11749	Guide, Brine Valve Stem
9	1	10249	Spring, Brine Valve
10	1	12550	Quad Ring, -009
11	1	12748	Brine Valve Body Assy, 1600 w/Quad Ring
12	1	12552-02	Brine Valve Stem, 1600, with Seat
13	1	12626	Seat, Brine Valve
14	1	11982	O-ring, -016
15	1	60020-25	BLFC, .25 GPM, 1600
		60020-50	BLFC, .50 GPM, 1600
		60020-100	BLFC, 1.0 GPM, 1600
16	1	60029-010	Brine Valve, 1600 Short Stem, 0.25 gpm
		60029-020	Brine Valve, 1600 Short Stem, 0.50 gpm
		60029-030	Brine Valve, 1600 Short Stem, 1.00 gpm

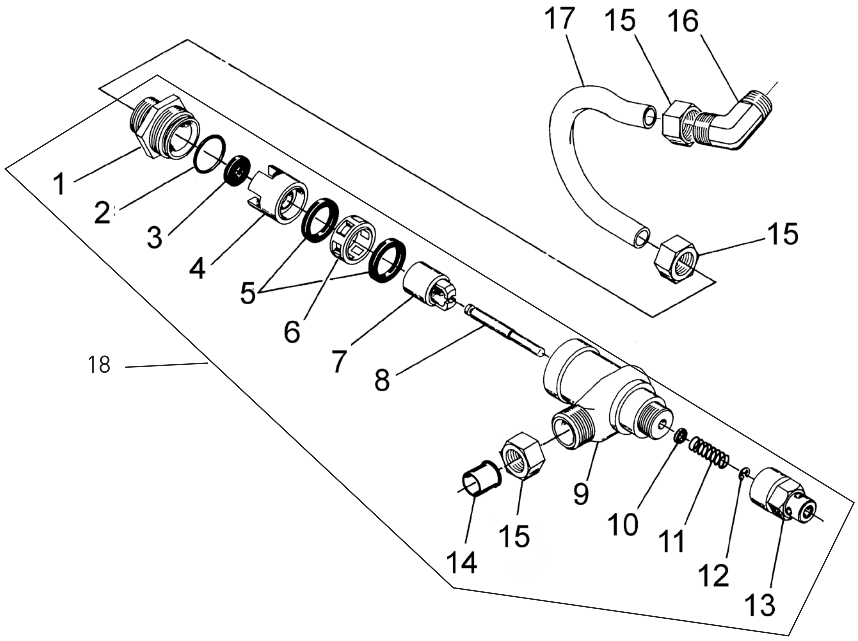
1650 BRINE SYSTEM



Item No.	QTY	Part No.	Description
1	1	10328	Elbow, 90 1/4 NPT x 3/8
3	3	10332	Insert, 3/8
4	1	10330	Sleeve, 3/8 Nut Brine
5	1	10329	Tube Fitting, 3/8 Nut Brine
6	1	16508-01	Tube, Brine Valve, 2850/2900s
		12774	Tube, Brine Valve, 1500
		40027	Tube, Brine Valve, 2510, HWBP
		14228	Tube, Brine Valve, 2510, NHWBP
		15221-01	Tube, Brine Valve, 2750/2900
		42184	Tube, Brine Valve, 2850s
		41683	Tube, Brine Valve, UF, 2900S 1600/1650
7	2	19625	Assy., GFN Nut
8	1	16924	O-ring, -018
9	1	12626	Seat, Brine Valve
10	1	12552	Brine Valve Stem, 1600
12	1	17906	Guide, Brine Valve Stem
13	1	10250	Retaining Ring
14	1	10249	Spring, Brine Valve
15	1	17884	Brine Valve Body Assy., Plastic
17	1	12794	Elbow, 3/8 Tube Poly, White
18	1	60002	#500 Air Check

Item No.	QTY	Part No.	Description
19		**60010-25 BLFC Assy. (Parts)**	
	1	17907	Housing
	1	12128	.25 GPM Label
	1	12094	.25 Flow Washer
	1	12098	Retainer
		60010-50 BLFC Assy. (Parts)	
	1	17907	Housing
	1	10759	.50 GPM Label
	1	12095	.50 Flow Washer
	1	12098	Retainer
		60010-100 BLFC Assy. (Parts)	
	1	17907	Housing
	1	10760	1.0 GPM Label
	1	12097	1.0 Flow Washer
	1	12098	Retainer
20		60011-010	Brine Valve, 1650, Short Stem, 0.25 gpm
		60011-020	Brine Valve, 1650, Short Stem, 0.50 gpm
		60011-030	Brine Valve, 1650, Short Stem, 1.00 gpm

1700 SERIES BRINE SYSTEM ASSEMBLY



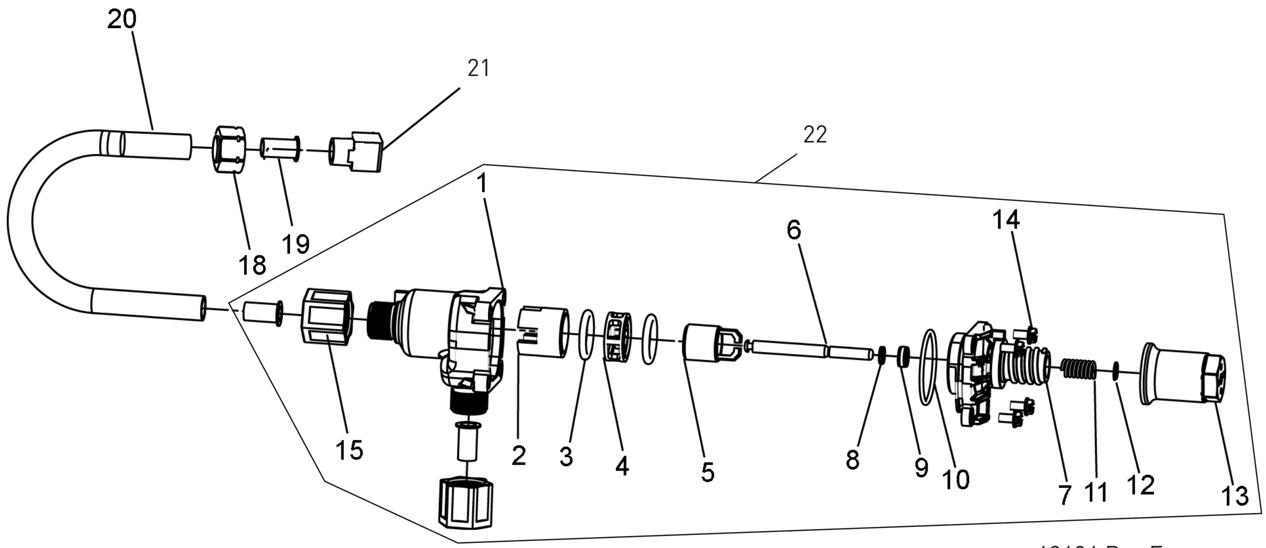
Item No.	QTY	Part No.	Description
1	1	14792	Plug, End, Brine Valve
2	1	13201	Quad Ring, -020
3	1	12085	Washer, Flow, 1.2 GPM
		12086	Washer, Flow, 1.5 GPM
		12087	Washer, Flow, 2.0 GPM
		12088	Washer, Flow, 2.4 GPM
		12089	Washer, Flow, 3.0 GPM
		12090	Washer, Flow, 3.5 GPM
		12091	Washer, Flow, 4.0 GPM
		12092	Washer, Flow, 5.0 GPM
4	1	14785	Retainer, Flow Control
5	3	14811	O-ring, -210, 560CD, Brine
6	1	14798	Spacer, 1700, Brine
7	1	14795	Piston, Brine Valve
8	1	14797	Brine Valve Stem
9	1	14790	Brine Valve Body
10	1	12550	Quad Ring, -009
11	1	15310	Spring, Brine Valve
12	1	10250	Retaining Ring
13	1	15517	Guide, Stem
14	1	15415	Fitting, Insert, 1/2-inch , Tube
15	2	15414	Nut, 2900, w/Sleeve
16	1	15413	Fitting, Elbow, Male, 1/2T x 3/8 NPT
17	1	15416	Tube, Brine, 2900/2750
		16460	Tube, Brine, 2850/2900s
		41447*	Tube, Brine, 2900s, U/F
		42183	Tube, Brine, 1700, 2850s

Item No.	QTY	Part No.	Description
18	1	60034-00	Brine Valve, 1700, Blank
		60034-10	Brine Valve, 1700, 1.0 gpm
		60034-12	Brine Valve, 1700, 1.2 gpm
		60034-15	Brine Valve, 1700, 1.5 gpm
		60034-20	Brine Valve, 1700, 2.0 gpm
		60034-24	Brine Valve, 1700, 2.4 gpm
		60034-30	Brine Valve, 1700, 3.0 gpm
		60034-40	Brine Valve, 1700, 4.0 gpm
		60034-50	Brine Valve, 1700, 5.0 gpm
Not Shown:			
	1	16974	Fitting, Plastic, Female, 3/4 x 3/4 Slip
	1	17996	Disperser, Air, Injector

*Upflow Only

NOTE: Item number 26 (11893) is used on injector sizes 2 through 5C. Part number 10228 is used on injector sizes 6C.

1710 BRINE SYSTEM ASSEMBLY



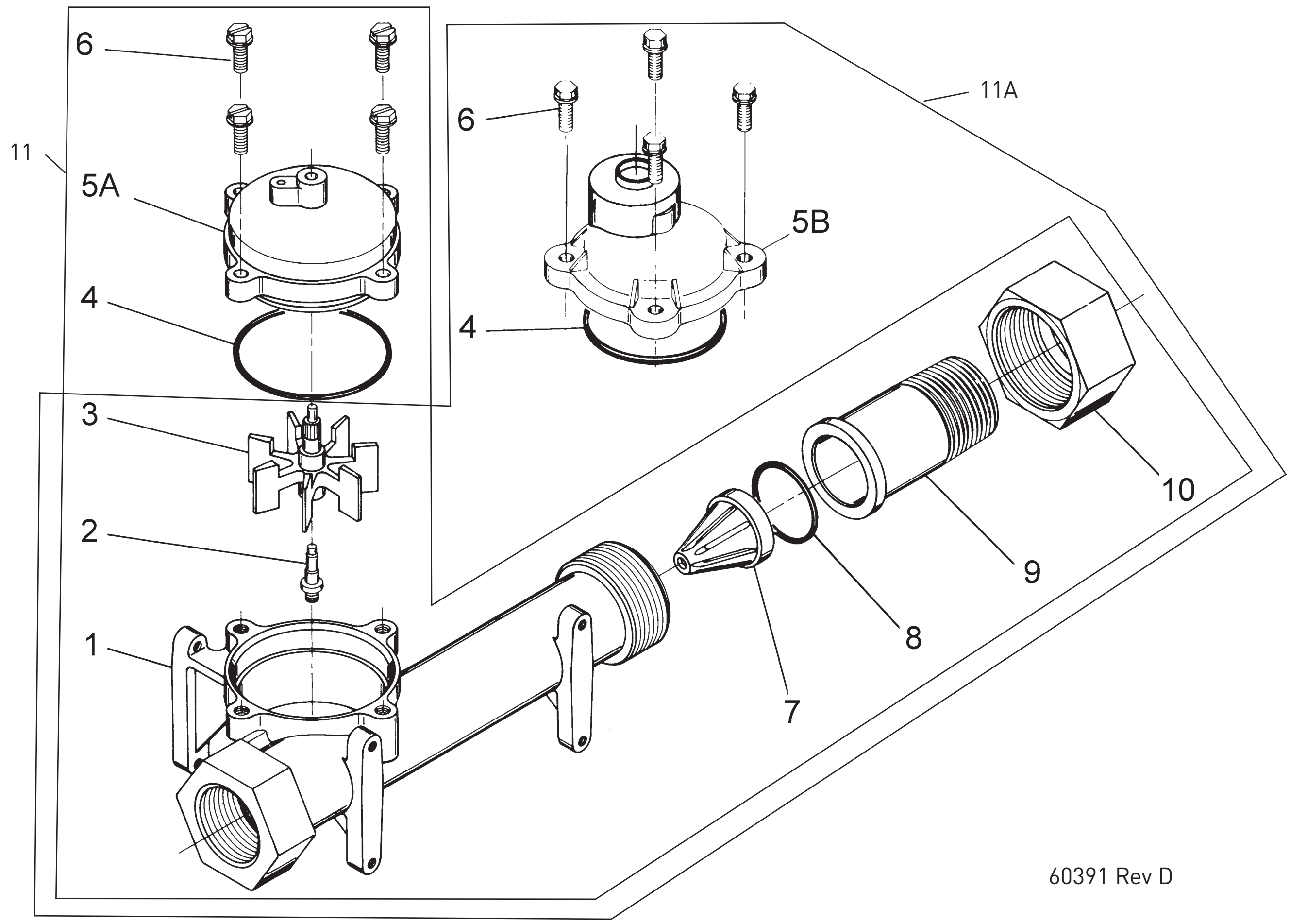
Item No.	QTY	Part No.	Description
1	1	41202	Brine Valve, 1700, Plastic, Top
2	1	14785-01	Retainer, Flow Control
3	1	14811	O-Ring, -210, 560CD, Brine
4	1	14798	Spacer, 1700, Brine
5	1	14795	Piston, Brine Valve
6	1	41203	Stem, Brine, 1710, Plastic, 2900
7	1	41201	Brine Valve, 1700, Plastic, Bottom
8	5	17908	Sleeve, Brine Valve Stem
9	1	12550	Quad Ring, -009
10	3	41547	O-Ring, 2mm x 35mm
11	2	15310	Spring, Brine Valve
12	2	10250	Ring, Retaining
13	1	17906	Guide, Brine Valve Stem
14	2	14202-01	Screw, Hex Wsh Mach, 8-32 X 5/16
15	2	41056	Nut Assembly, 1/2-inch Plastic
18	1	15414	Nut, 2900, w/Sleeve
19	1	15415	Fitting, Insert, 1/2-inch , Tube
20	1	16460	Tube, Brine, 2850, 2900s
		42183	Tube, Brine, 1700/2850s
		15416	Tube, Brine, 2900/2750
		41447*	Tube, Brine, 2900s U/F
21	1	15413	Fitting, Elbow, Male, 1/2T X 3/8 NPT
22		60605-00	Brine Valve, 1710, 2750, Blank
		60605-10	Brine Valve, 1710, 2750, 1.0 gpm
		60605-12	Brine Valve, 1710, 2750, 1.2 gpm
		60605-15	Brine Valve, 1710, 2750, 1.5 gpm
		60605-20	Brine Valve, 1710, 2750, 2.0 gpm
		60605-24	Brine Valve, 1710, 2750, 2.4 gpm
		60605-30	Brine Valve, 1710, 2750, 3.0 gpm
		60605-40	Brine Valve, 1710, 2750, 4.0 gpm
		60605-50	Brine Valve, 1710, 2750, 5.0 gpm

Not Shown

Item No.	QTY	Part No.	Description
	1	19151	Washer, Flow, 1.0 gpm
	1	17996	Disperser, Air, Injector
	1	414193-00	Label, Blank, BLFC, 1710

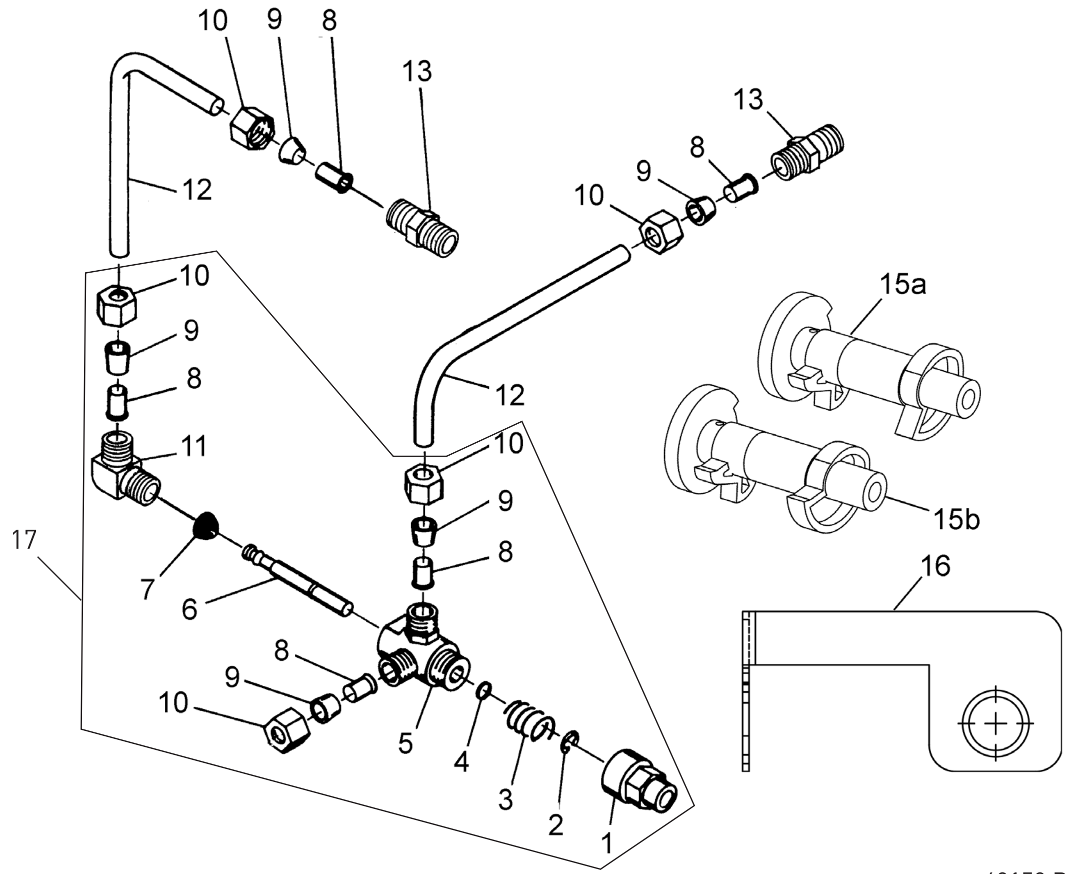
*Upflow only

1-INCH METER ASSEMBLY



Item No.	QTY	Part No.	Description
1	1	14959	Body, Meter, 2750
2	1	13882	Post, Meter Impeller
3	1	13509	Impeller, Meter
4	1	13847	O-ring, -137, Std/560CD, Meter
5A	1	15218	Meter Cap Assembly, Brass, Hot Water
5B	1	15237	Meter Cap Assembly, Ext, Brass, Hot Water
6	4	12112	Screw, Hex Hd Mach, 10-24 x 1/2
7	1	14960	Flow Straightener, 1-inch
8	1	13287	O-ring, -123
9	1	14961	Fitting, 1-inch Quick Connect
10	1	14962	Nut, 1-inch Meter, Quick Connect
11	1	60391	Meter Assy, 1-inch Inline, NPT STD Brass Paddlewheel
11A		60392	Meter Assy, 1-inch , Inline, NPT EXT Brass Paddlewheel
Not Shown			
	1	15308	Fitting, Coupling, 1-inch , Brass
	1	14038	Meter Cap Assembly, Std, Plastic
	1	15150	Meter Cap Assembly, Ext, Plastic

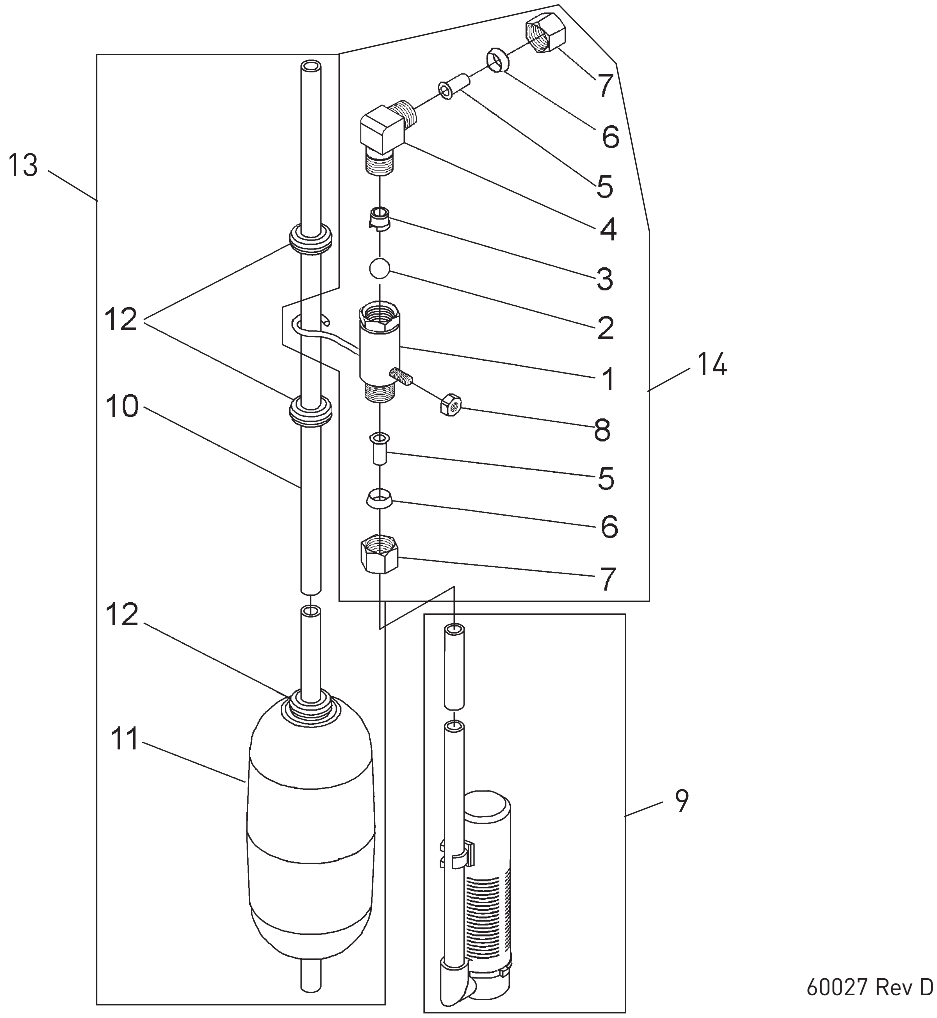
1600 SERVICE VALVE OPERATOR (NEW STYLE)



60150 Rev A

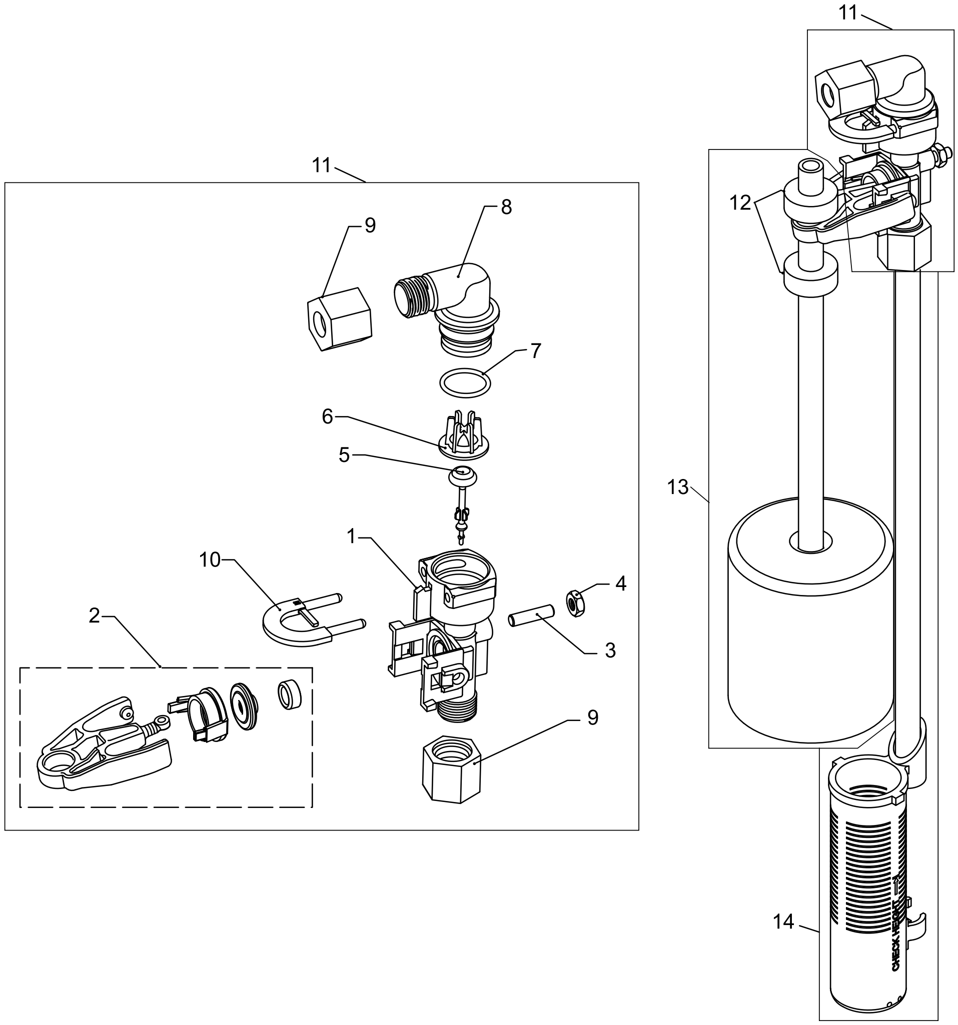
Item No.	QTY	Part No.	Description
1	1	11749	Guide, Brine Valve Stem
2	1	10250	Ring, Retaining
3	1	10249	Spring, Brine Valve
4	1	12550	Quad Ring, -009
5	2	10785	SVO Body Assy Brass Valves
6	1	12552	Brine Valve Stem, 1600
7	1	12626	Seat, Brine Valve
8	5	10332	Fitting, Insert, 3/8
9	5	10330	Fitting, Sleeve, 3/8-inch Celcon
10	5	10329	Fitting, Tube, 3/8 Nut, Brass
11	1	10328	Fitting, Elbow, 90 Deg 1/4 NPT x 3/8 Tube
12	2	12897	Tube, Fitting, 3/8 x 9 3/4
13	1	16730	Fitting, Male, 1/4 x 1
14	2	15415	Fitting, Insert, 1/2-inch Tube
15a	1	12472	Cam Assy, Tri-Stack, After RR
15b	1	15770	Cam Assy, Special Tri-Stack After Brine Fill
16	1	12114	Bracket, Motor Outboard, Coated
17	1	60150-01	Service Valve Operator Assy, 1600, New Style, Item Nos 1-11

2300 SAFETY BRINE VALVE



Item No.	QTY	Part No.	Description
1	1	60027-00	Safety Brine Valve, 2300, Less Elbow
2	1	10138	Ball, 3/8-inch , Brass
3	1	11566	Ball Stop, Slow Fill
4	1	10328	Fitting, Elbow, 90 Deg. 1/4 NPT x 3/8 Tube
5	1	10332	Fitting, Insert, 3/8
6	1	10330	Fitting, Sleeve, 3/8 Celcon
7	1	10329	Fitting, Tube, 3/8 Nut, Brass
8	1	10186	Nut, Hex, 10-32
9	1	60002-10	Air Check, #500, American Hydro
		60002-11.38	Air Check, #500, 11.38 inches Long
		60002-24	Air Check, #500, 24 inches Long
		60002-27	Air Check, #500, 27 inches Long
		60002-32	Air Check, #500, 32 inches Long
		60002-34	Air Check, #500, 34 inches Long
		60002-36	Air Check, #500, 36 inches Long
		60002-48	Air Check, #500, 48 inches Long
		60002-26.25	Air Check, #500, 26.25 inches Long
		60002-33.25	Air Check, #500, 33.25 inches Long
10	1	10149	Rod, Float, 30-inch
11	1	10700	Float Assy, White
12	3	10150	Grommet, .30 Dia
13	1	60028-30	Float Assy, 2300, 30-inch White
14	1	60027-FFA	Safety Brine Valve, 2300, Fitting Facing Arm
	1	60027-FFS	Safety Brine Valve, 2300 Fitting Facing Stud

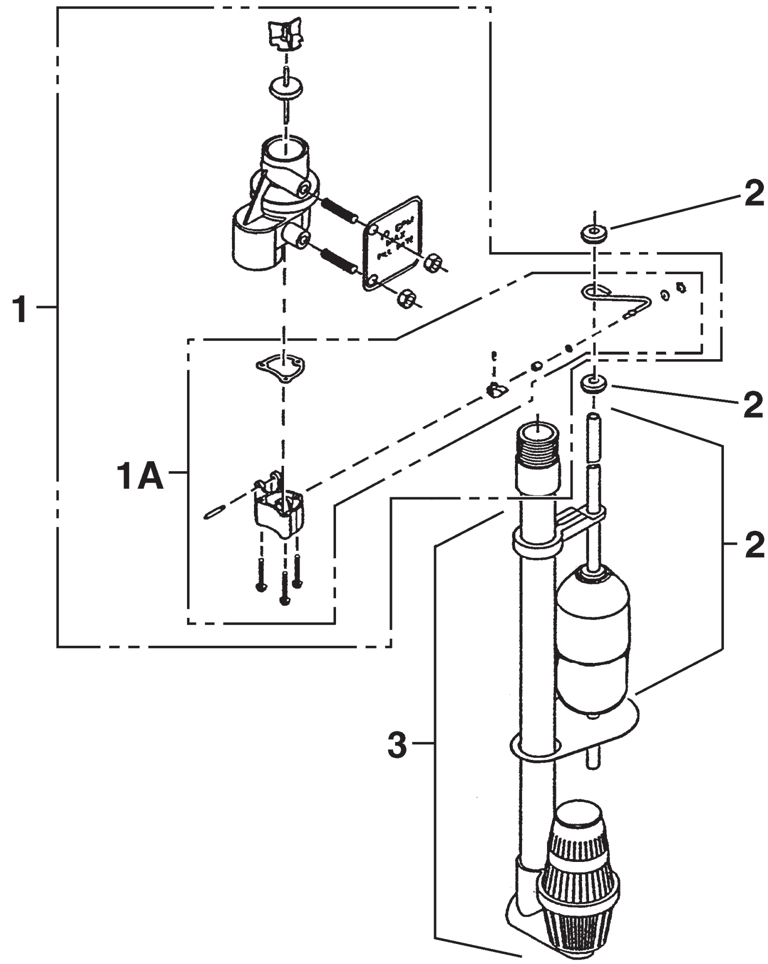
2310 SAFETY BRINE VALVE



42112_REVA

Item No.	QTY	Part No.	Description
1	1	19645	Body, Safety Brine Valve, 2310
2	1	19803	Safety Brine Valve Assy
3	1	19804	Screw, Sckt Hd, Set, 10-24 x .75
4	1	19805	Nut, Hex, 10-24, Nylon Black
5	1	19652-01	Poppet Assy, SBV w/O-ring
6	1	19649	Flow Dispenser
7	1	11183	O-ring, -017
8	1	19647	Elbow, Safety Brine Valve
9	2	19625	Nut Assy, 3/8-inch Plastic
10	1	18312	Retainer, Drain
11	1	60014	Safety Brine Valve Assy, 2310
12	2	10150	Grommet, .30 Dia
13	1	60068-8.06	Float Assy, 2310, w/8.06-inch Rod
		60068-10.5	Float Assy, 2310, w/10.5-inch Rod
		60068-11.5	Float Assy, 2310, w/11.5-inch Rod
		60068-20	Float Assy, 2310, w/20-inch Rod
		60068-30	Float Assy, 2310, w/30-inch Rod
14	1	60002-10	Air Check, #500, American Hydro
		60002-11.38	Air Check, #500, 11.38 inches Long
		60002-24	Air Check, #500, 24 inches Long
		60002-27	Air Check, #500, 27 inches Long
		60002-32	Air Check, #500, 32 inches Long
		60002-34	Air Check, #500, 34 inches Long
		60002-36	Air Check, #500, 36 inches Long
		60002-48	Air Check, #500, 48 inches Long
		60002-26.25	Air Check, #500, 26.25 inches Long
		60002-33.25	Air Check, #500, 33.25 inches Long

2350 SAFETY BRINE VALVE ASSEMBLY

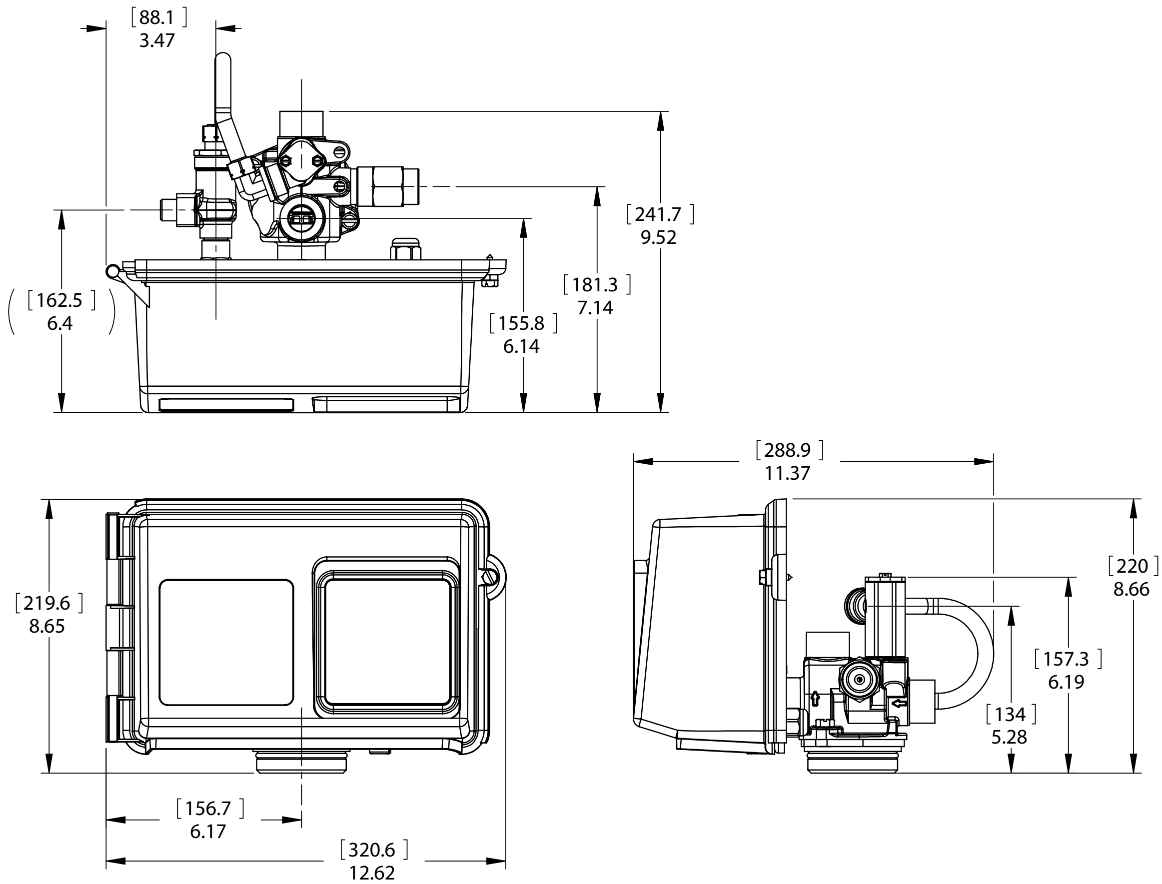


42303 REV A

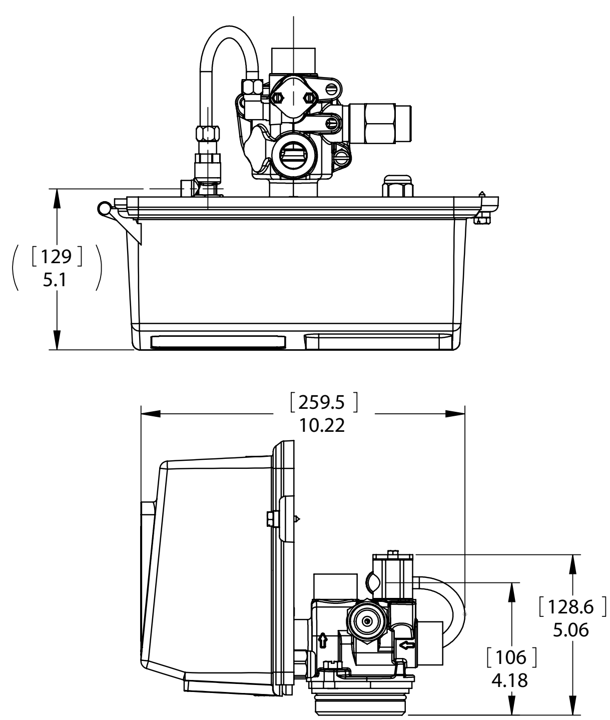
Item No.	QTY	Part No.	Description
1	1	60038	Safety Brine Valve, 2350
1A	1	61024	Actuator Assembly, 2350 Brine
2	1	60028-30	Float Assembly, 2350, 30-inch Wht
		60026-30SAN	Float Assembly, 2350, 30-inch , HW
3	1	60009-00	Air Check, #900, Commercial Less Fittings
		60009-01	Air Check, #900, Commercial, HW Less Fittings
Not Shown:			
	1	18603	Fitting Assembly, 900 Air Check 2350
	1	18602	Fitting Assembly, 900 Air Check

2750 CONTROL VALVE DIMENSIONS

2750 MODEL WITH
1700 BRINE SYSTEM



2750 MODEL WITH
1600 BRINE SYSTEM



BR61500-2750LNE Rev B

TROUBLESHOOTING

Problem	Cause	Correction
Water conditioner fails to regenerate.	Electrical service to unit has been interrupted	Assure permanent electrical service (check fuse, plug, pull chain, or switch)
	Timer is defective.	Replace timer.
	Power failure.	Reset time of day.
Hard water.	By-pass valve is open.	Close by-pass valve.
	No salt is in brine tank.	Add salt to brine tank and maintain salt level above water level.
	Injector screen plugged.	Clean injector screen.
	Insufficient water flowing into brine tank.	Check brine tank fill time and clean brine line flow control if plugged.
	Hot water tank hardness.	Repeated flushings of the hot water tank is required.
	Leak at distributor tube.	Make sure distributor tube is not cracked. Check o-ring and tube pilot.
	Internal valve leak.	Replace seals and spacers and/or piston.
Unit used too much salt.	Improper salt setting.	Check salt usage and salt setting.
	Excessive water in brine tank.	See "Excessive water in brine tank".
Loss of water pressure.	Iron buildup in line to water conditioner.	Clean line to water conditioner.
	Iron buildup in water conditioner.	Clean control and add mineral cleaner to mineral bed. Increase frequency of regeneration.
	Inlet of control plugged due to foreign material broken loose from pipes by recent work done on plumbing system.	Remove piston and clean control.
Loss of mineral through drain line.	Air in water system.	Assure that well system has proper air eliminator control. Check for dry well condition.
	Improperly sized drain line flow control.	Check for proper drain rate.
Iron in conditioned water.	Fouled mineral bed.	Check backwash, brine draw, and brine tank fill. Increase frequency of regeneration. Increase backwash time.
Excessive water in brine tank.	Plugged drain line flow control.	Clean flow control.
	Plugged injector system.	Clean injector and screen.
	Timer not cycling.	Replace timer.
	Foreign material in brine valve.	Replace brine valve seat and clean valve.
	Foreign material in brine line flow control.	Clean brine line flow control.
Softener fails to draw brine.	Drain line flow control is plugged.	Clean drain line flow control.
	Injector is plugged.	Clean injector
	Injector screen plugged.	Clean screen.
	Line pressure is too low.	Increase line pressure to 20 psi
	Internal control leak	Change seals, spacers, and piston assembly.
	Service adapter did not cycle.	Check drive motor and switches.
Control cycles continuously.	Misadjusted, broken, or shorted switch.	Determine if switch or timer is faulty and replace it, or replace complete power head.
Drain flows continuously.	Valve is not programming correctly.	Check timer program and positioning of control. Replace power head assembly if not positioning properly.
	Foreign material in control.	Remove power head assembly and inspect bore. Remove foreign material and check control in various regeneration positions.
	Internal control leak.	Replace seals and piston assembly.

GENERAL SERVICE HINTS FOR METER CONTROL

Problem: Softener delivers hard water

Reason: Reserve capacity has been exceeded.

Correction: Check salt dosage requirements and reset program wheel to provide additional reserve.

Reason: Program wheel is not rotating with meter output.

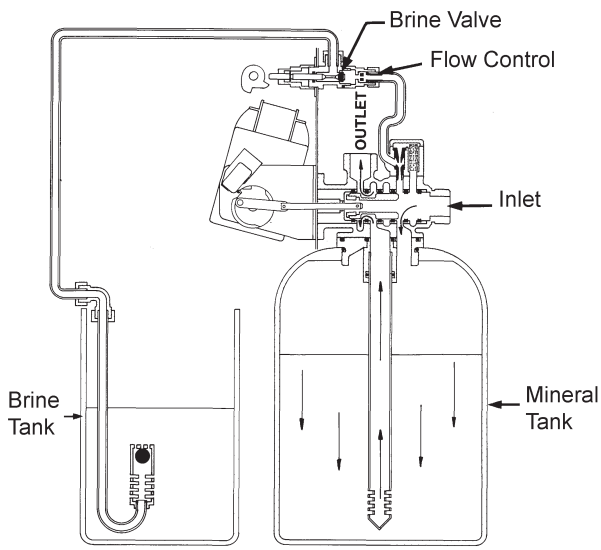
Correction: Pull cable out of meter cover and rotate manually. Program wheel must move without binding and clutch must give positive clicks when program wheel strikes regeneration stop. If it does not, replace timer.

Reason: Meter is not measuring flow.

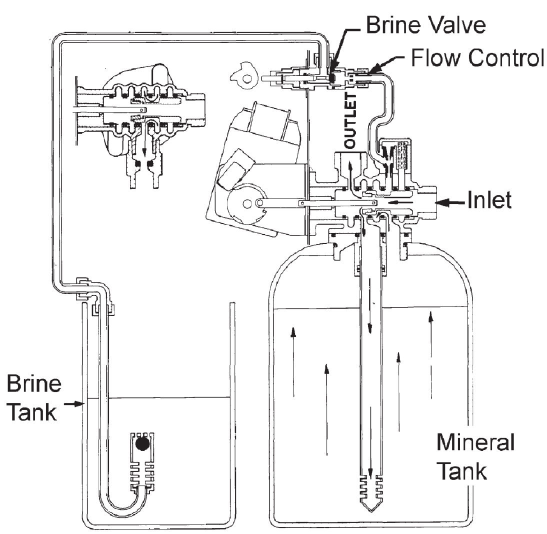
Correction: Check meter with meter checker.

WATER CONDITIONER FLOW DIAGRAMS

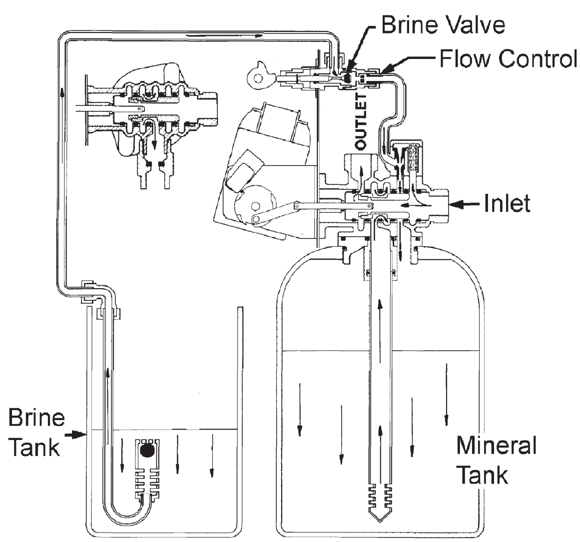
1 Service Position



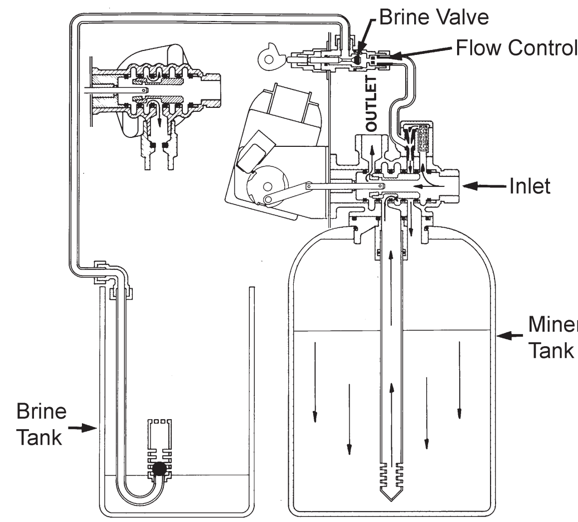
2 Backwash Position



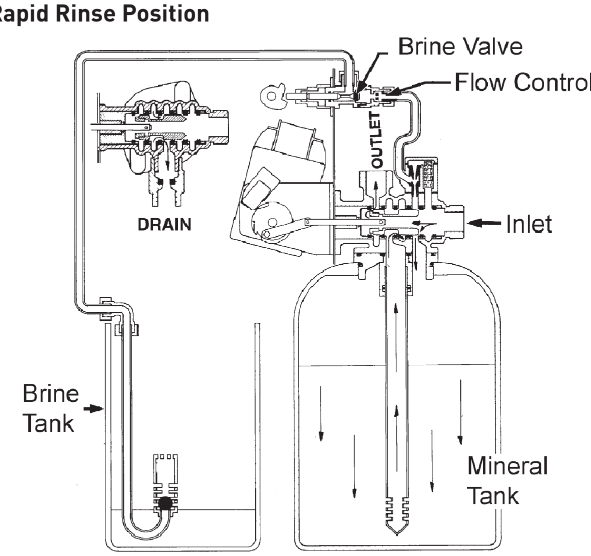
3 Brine Position



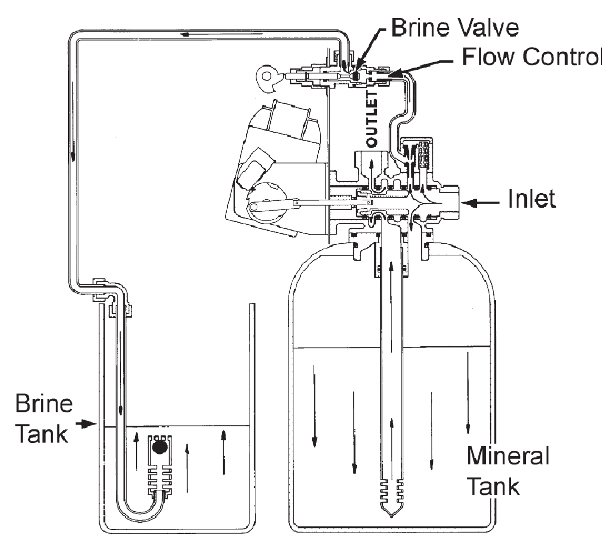
4 Slow Rinse Position



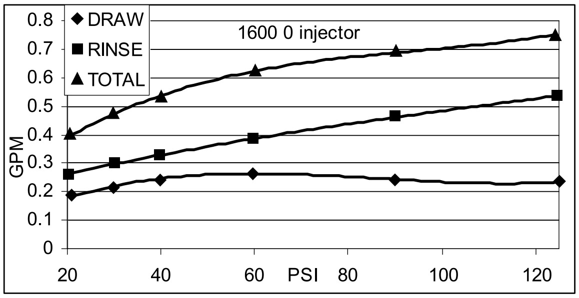
5 Rapid Rinse Position

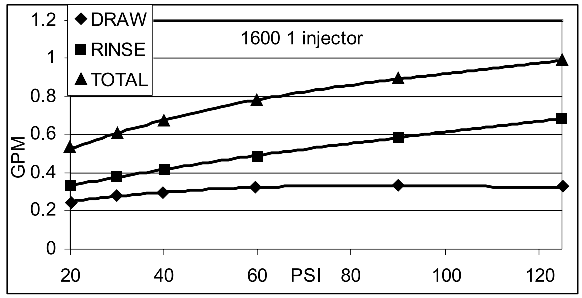


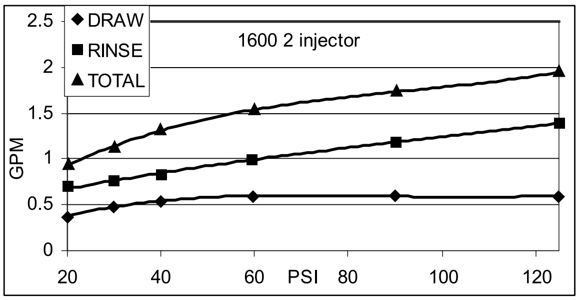
6 Brine Tank Fill Position

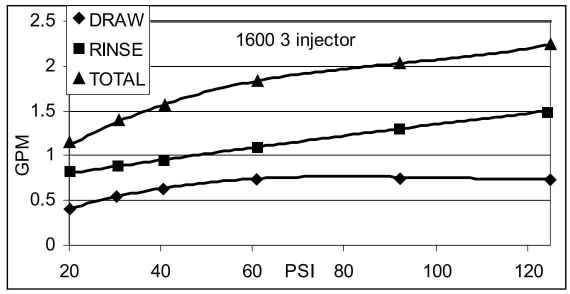


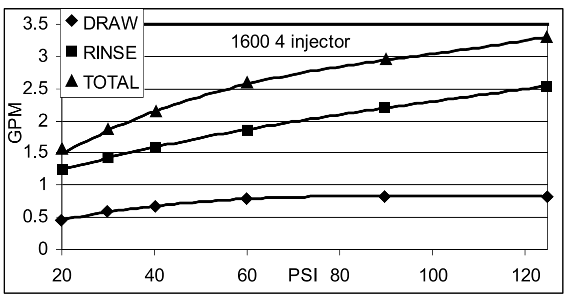
FLOW DATA & INJECTOR DRAW RATES

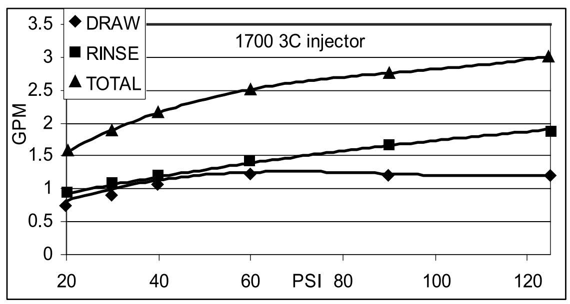


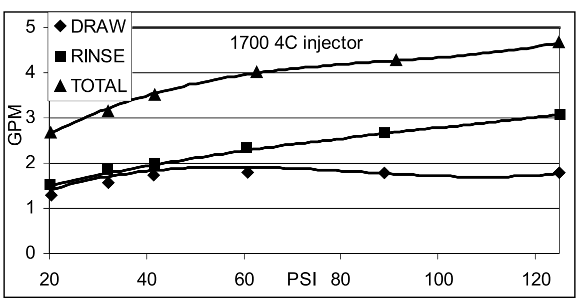


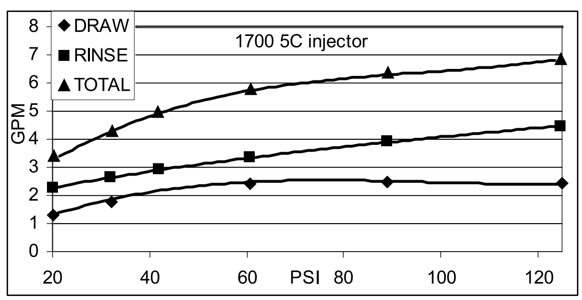


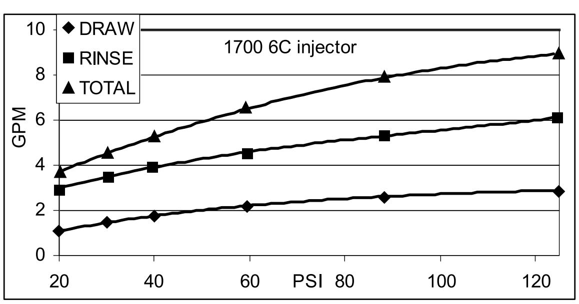








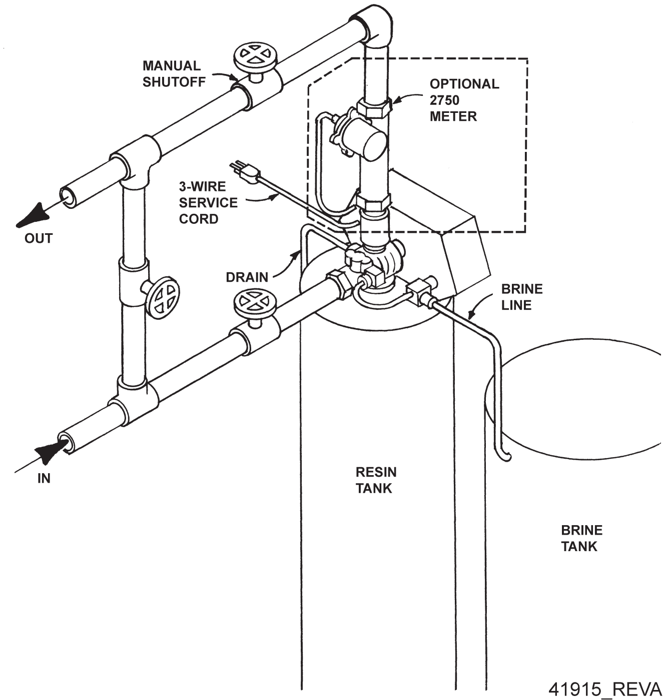




TR20391_REVA

SYSTEM #4

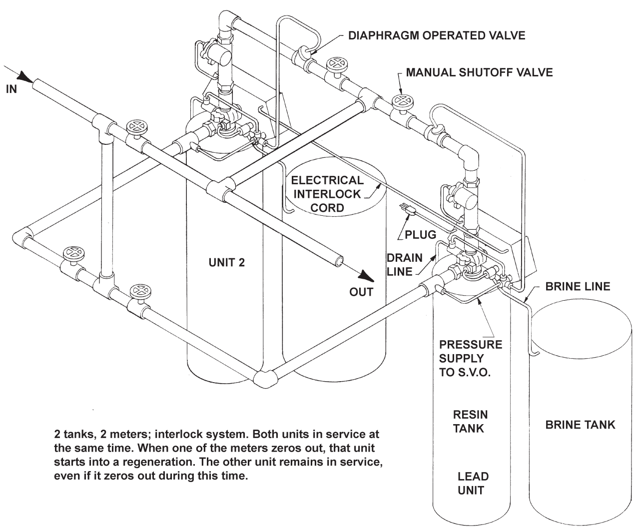
Typical Tank Installation with Optional Meter



41915_REVA

SYSTEM #5 INTERLOCK

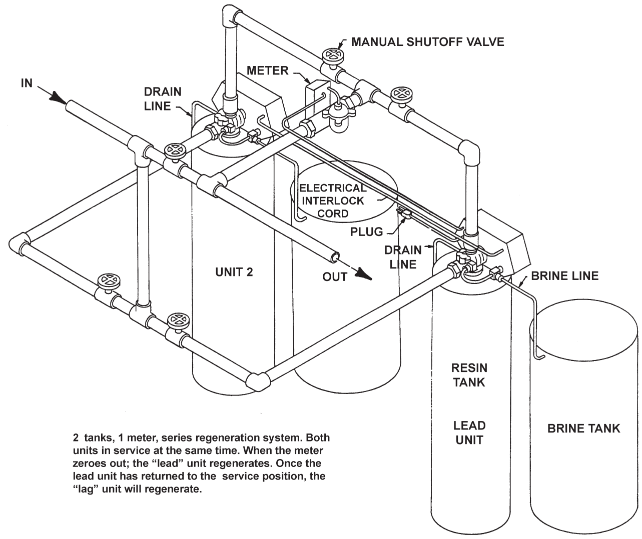
Typical Twin Tank Installation with Optional 2 Meter Interlock and No Hard Water Bypass



41917_REVA

SYSTEM #6

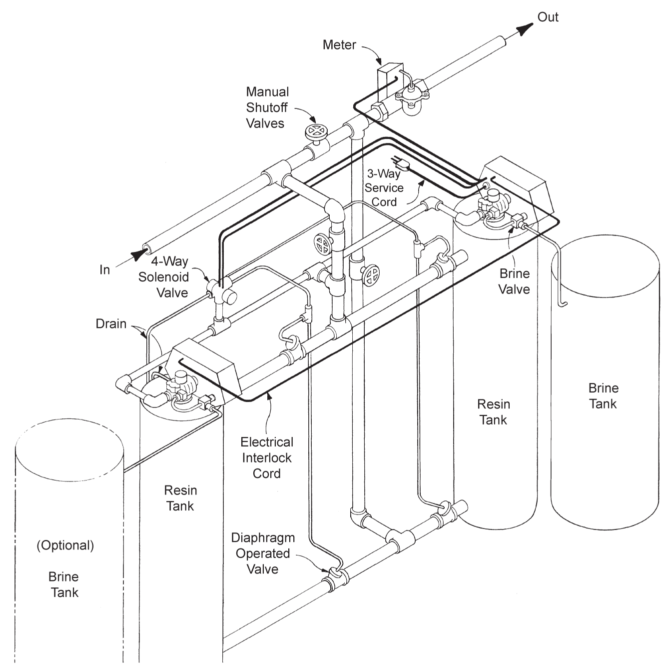
Twin Series Regeneration Installation with a Remote Meter



41916_REVA

SYSTEM #7

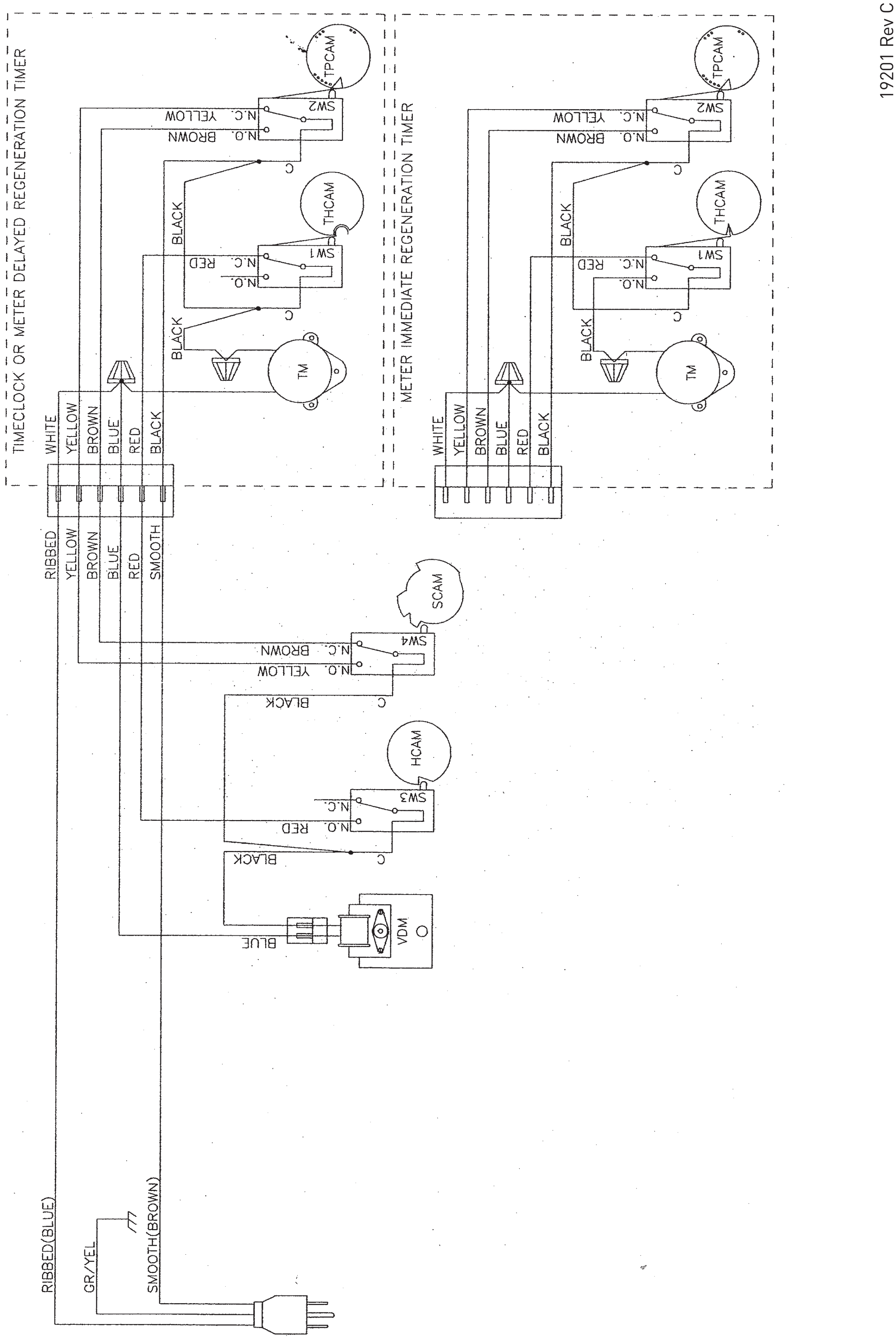
Twin Alternator Installation with a Remote Meter



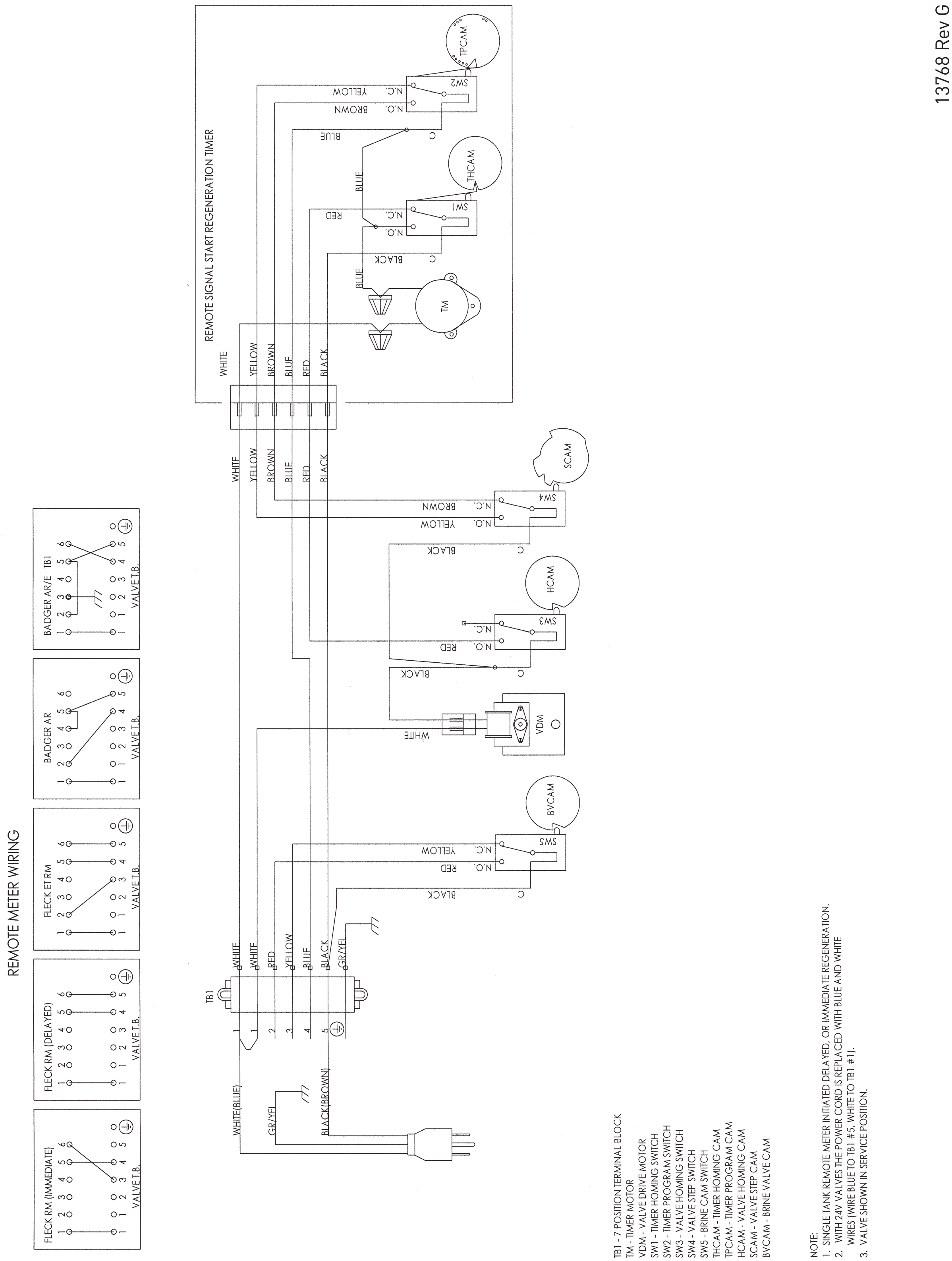
2 tanks, 1 meter; alternator system. One unit in service, the other is on standby. When the meter zeroes out the unit in service goes into a regeneration cycle, the standby unit, goes into service.

41918_REVA

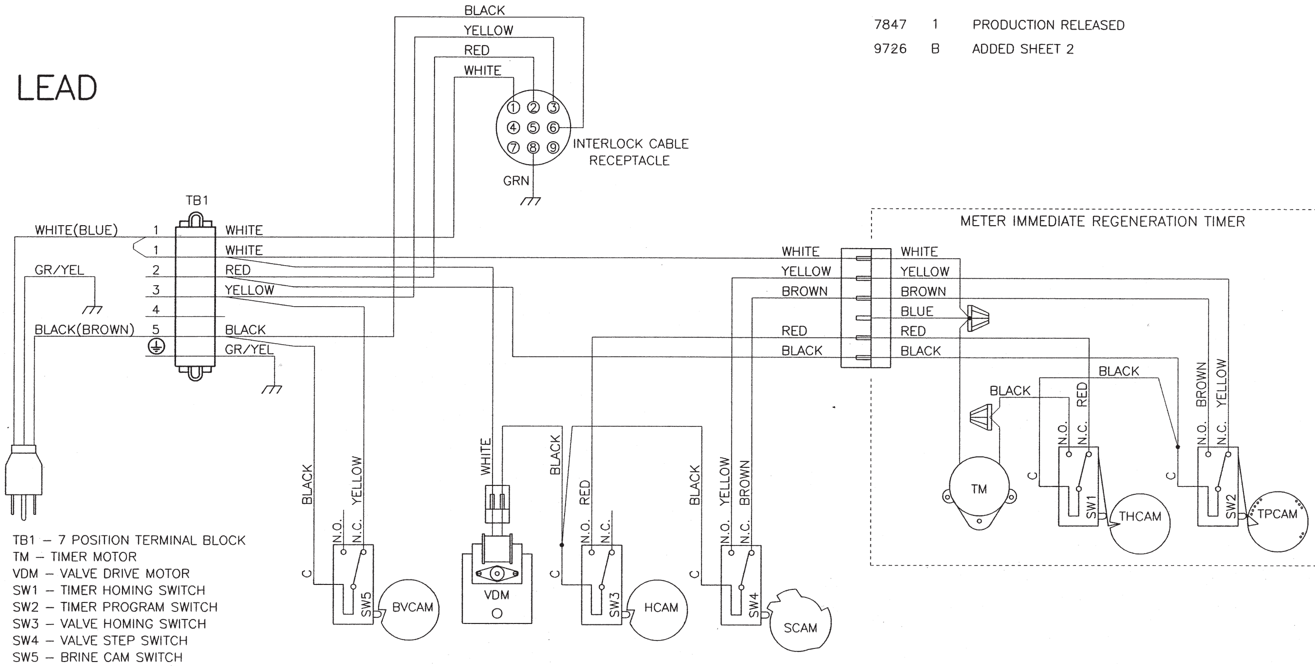
SYSTEM #4 IMMEDIATE & DELAYED VALVE WIRING



SYSTEM #4 REMOTE SIGNAL START
VALVE WIRING



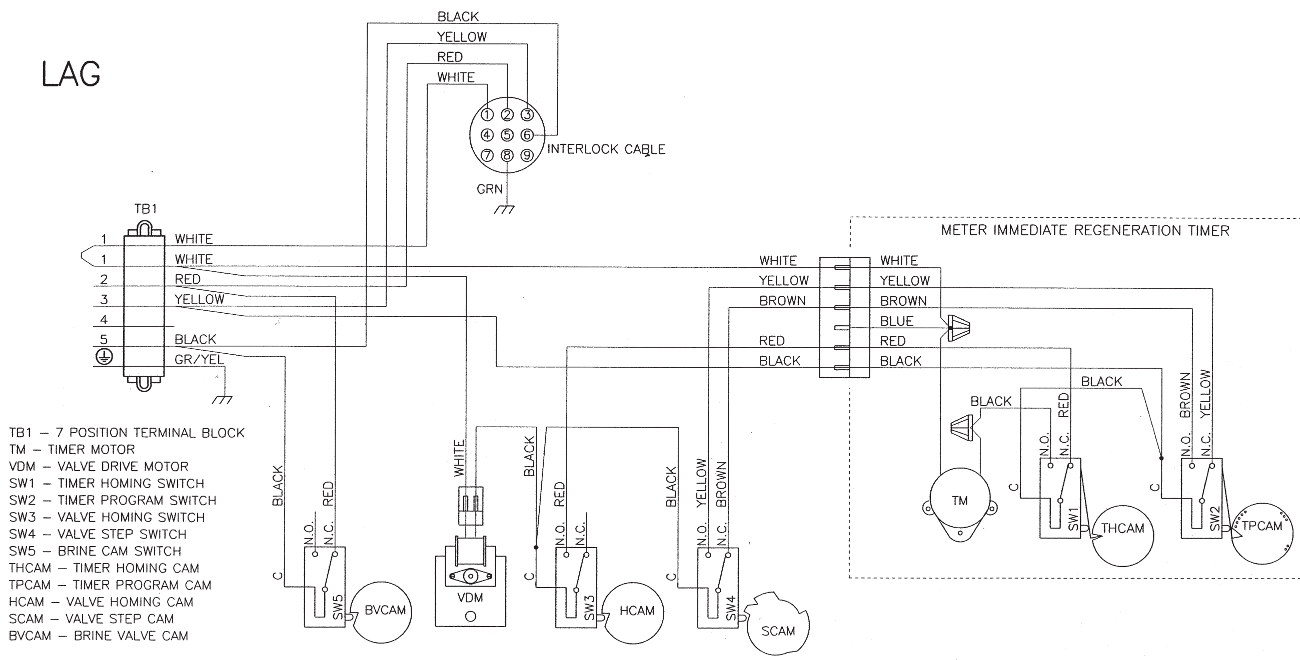
SYSTEM #5 DUPLEX VALVE WIRING



TB1 – 7 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
VDM – VALVE DRIVE MOTOR
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – BRINE CAM SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM
BVCAM – BRINE VALVE CAM

NOTE:
1. BOTH VALVES IN SERVICE, ONLY ONE VALVE IN REGENERATION AT A TIME.
2. INDIVIDUAL LOCAL METER REGENERATION.
3. VALVE SHOWN IN SERVICE.

40502-01 REV C

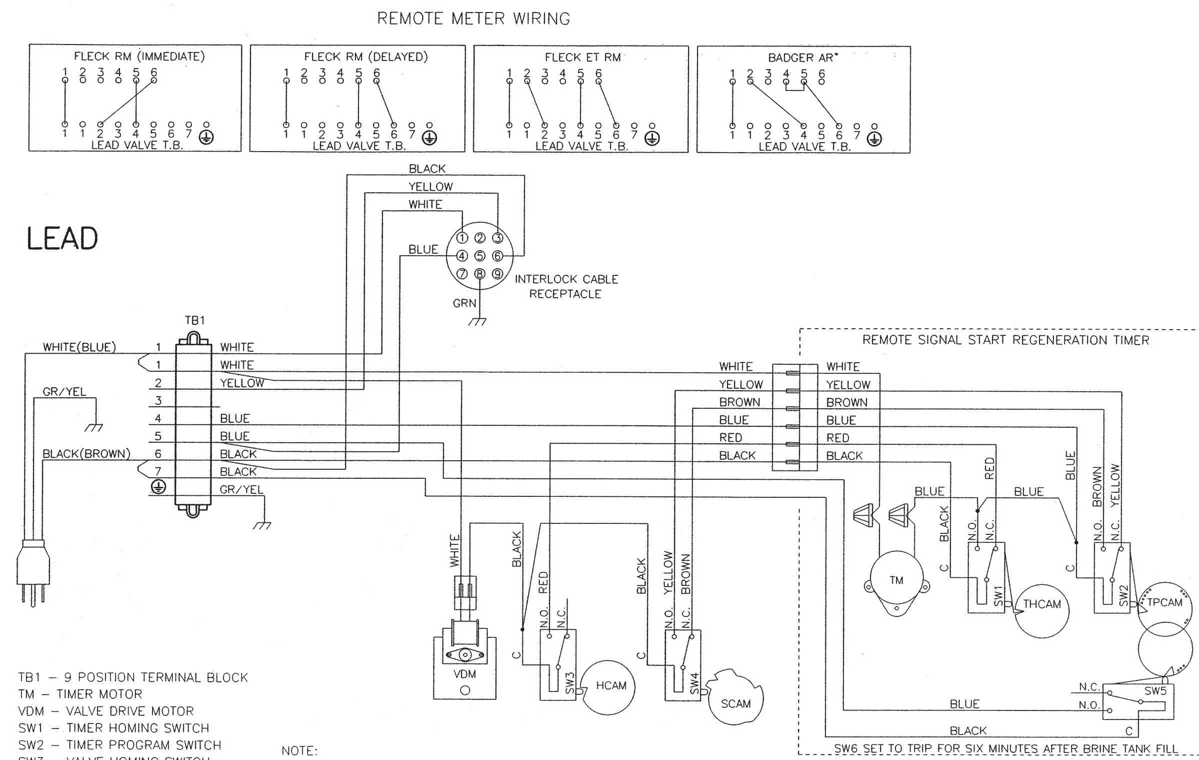


TB1 – 7 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
VDM – VALVE DRIVE MOTOR
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – BRINE CAM SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM
BVCAM – BRINE VALVE CAM

NOTE:
1. BOTH VALVES IN SERVICE, ONLY ONE VALVE IN REGENERATION AT A TIME.
2. INDIVIDUAL LOCAL METER REGENERATION.
3. VALVE SHOWN IN SERVICE.

40502-02 REV C

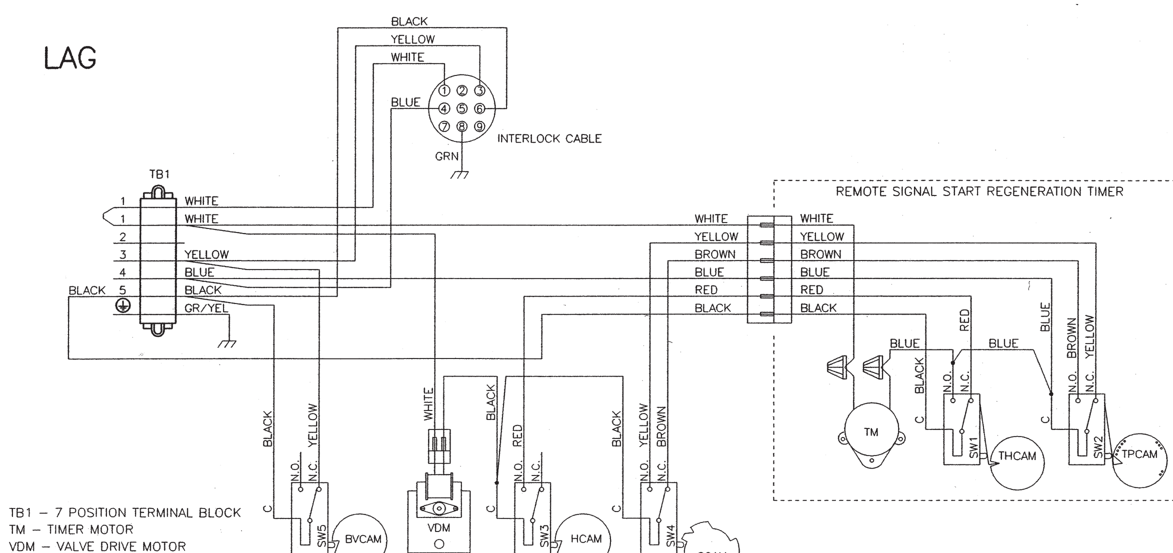
SYSTEM #6 DUPLEX VALVE WIRING



TB1 – 9 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
VDM – VALVE DRIVE MOTOR
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – AUXILIARY TIMER SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM

NOTE:
1. TWO TANK INTERLOCKED, SINGLE REMOTE METER, SERIES REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE.
3. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
4. LEAD VALVE REGENERATES FIRST, FOLLOWED IMMEDIATELY BY LAG VALVE.
5. WITH 24V VALVES THE POWER CORD IS REPLACED WITH BLUE AND WHITE WIRES (WIRE BLUE TO TB1 #6, WHITE TO TB1 #1).
6. VALVE SHOWN IN SERVICE POSITION.

13632-01 REV L

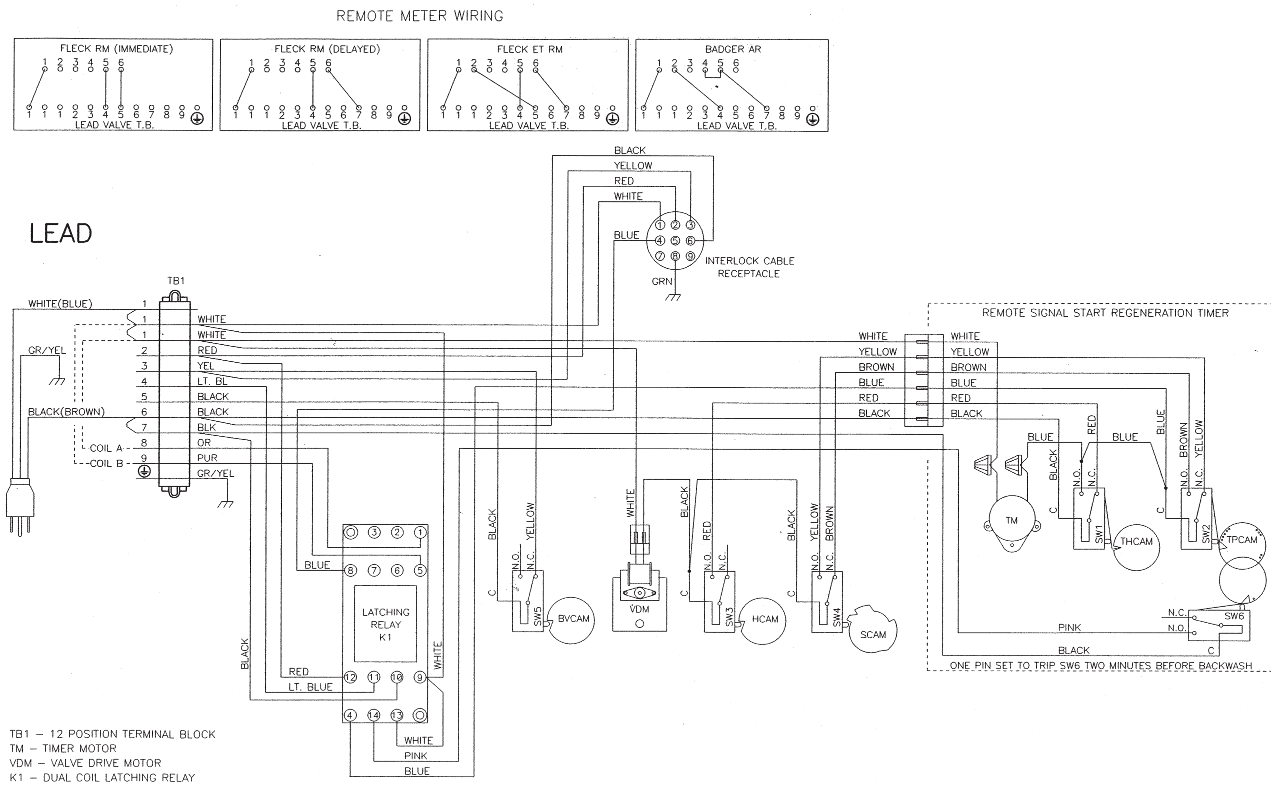


TB1 – 7 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
VDM – VALVE DRIVE MOTOR
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – BRINE CAM SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM
BVCAM – BRINE VALVE CAM

NOTE:
1. TWO TANK INTERLOCKED, SINGLE REMOTE METER, SERIES REGENERATION.
2. BOTH TANKS NORMALLY IN SERVICE.
3. ONLY ONE TANK IN REGENERATION, THE OTHER REMAINS IN SERVICE.
4. LEAD VALVE REGENERATES FIRST, FOLLOWED IMMEDIATELY BY LAG VALVE.
5. WITH 24V VALVES, THE POWER CORD IS REPLACED WITH BLUE AND WHITE WIRES (WIRE BLUE TO TB1 #6, WHITE TO TB1 #1).
6. VALVE SHOWN IN SERVICE POSITION.

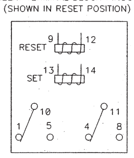
13632-02 REV L

SYSTEM #7 DUPLEX 24V/120V 3-WAY VALVE WIRING



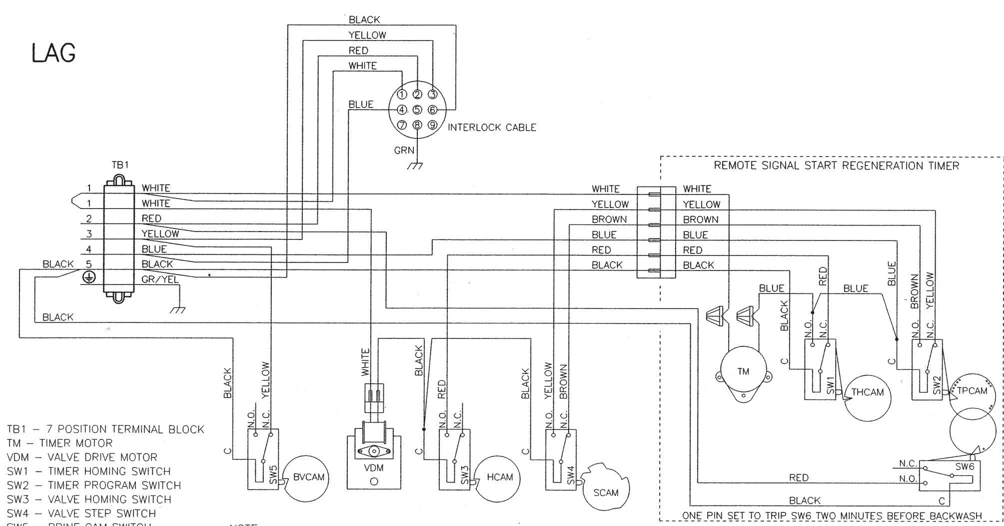
TB1 – 12 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
VDM – VALVE DRIVE MOTOR
K1 – DUAL COIL LATCHING RELAY
– 24V P/N 17018
– 120V P/N 16807
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – BRINE CAM SWITCH
SW6 – TIMER AUXILIARY SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM
BVCAM – BRINE VALVE CAM

RELAY TERMINAL BLOCK PINOUT
(SHOWN IN RESET POSITION)



NOTE:
1. TWO TANK SINGLE REMOTE METER ALTERNATING REGENERATION. ONLY ONE TANK IN SERVICE THE OTHER IN REGENERATION OR STANDBY.
2. SYSTEM WIRED FOR 3–WAY SOLENOID OUTPUT. COIL A CLOSES THE DIAPHRAGM VALVES OF LAG UNIT. COIL B CLOSES THE DIAPHRAGM VALVES OF LEAD UNIT.
3. VALVE SHOWN IN SERVICE POSITION.

19138-01 REV E

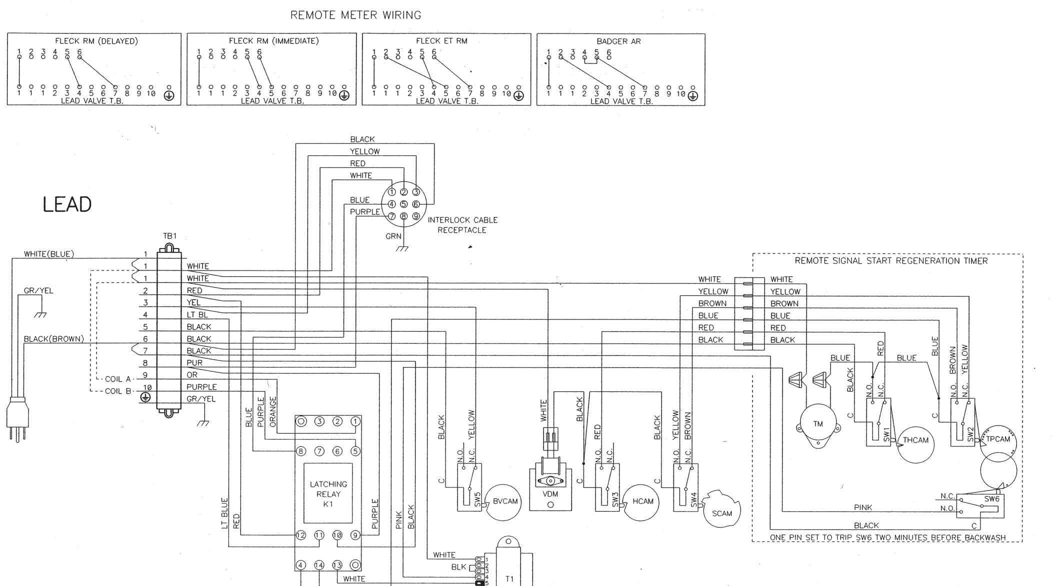


TB1 – 7 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
VDM – VALVE DRIVE MOTOR
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – BRINE CAM SWITCH
SW6 – TIMER AUXILIARY SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM
BVCAM – BRINE VALVE CAM

NOTE:
1. TWO TANK SINGLE REMOTE METER ALTERNATING REGENERATION. ONLY ONE TANK IN SERVICE THE OTHER IN REGENERATION OR STANDBY.
2. SYSTEM WIRED FOR 3–WAY SOLENOID OUTPUT. COIL A CLOSES THE DIAPHRAGM VALVES OF LAG UNIT. COIL B CLOSES THE DIAPHRAGM VALVES OF LEAD UNIT.
3. VALVE SHOWN IN SERVICE POSITION.

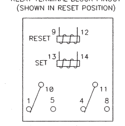
19138-02 REV E

SYSTEM #7 DUPLEX 230V 3-WAY VALVE WIRING



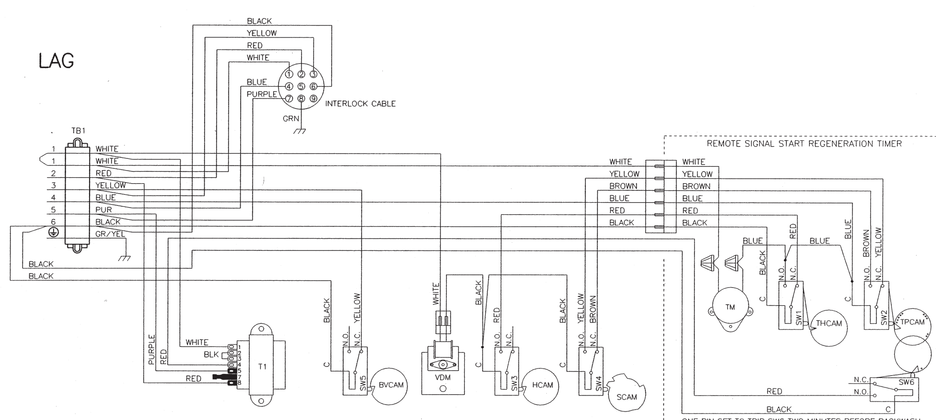
TB1 – 13 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
VDM – VALVE DRIVE MOTOR
K1 – 120V DUAL COIL LATCHING RELAY P/N 16807
T1 – 230V/120V TRANSFORMER P/N 40112
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – BRINE CAM SWITCH
SW6 – TIMER AUXILIARY SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM
BVCAM – BRINE VALVE CAM

RELAY TERMINAL BLOCK PINOUT
(SHOWN IN RESET POSITION)



NOTE:
1. TWO TANK SINGLE REMOTE METER ALTERNATING REGENERATION.
   ONLY ONE TANK IN SERVICE THE OTHER IN REGENERATION OR STANDBY.
2. SYSTEM WIRED FOR 3–WAY SOLENOID OUTPUT.
   COIL A CLOSES THE DIAPHRAGM VALVES OF LAG UNIT.
   COIL B CLOSES THE DIAPHRAGM VALVES OF LEAD UNIT.
3. VALVE SHOWN IN SERVICE POSITION.

17727-01 REV E



TB1 – 8 POSITION TERMINAL BLOCK
TM – TIMER MOTOR
T1 – 230V TO 120V TRANSFORMER P/N 40112
VDM – VALVE DRIVE MOTOR
SW1 – TIMER HOMING SWITCH
SW2 – TIMER PROGRAM SWITCH
SW3 – VALVE HOMING SWITCH
SW4 – VALVE STEP SWITCH
SW5 – BRINE CAM SWITCH
SW6 – TIMER AUXILIARY SWITCH
THCAM – TIMER HOMING CAM
TPCAM – TIMER PROGRAM CAM
HCAM – VALVE HOMING CAM
SCAM – VALVE STEP CAM
BVCAM – BRINE VALVE CAM

NOTE:
1. TWO TANK SINGLE REMOTE METER ALTERNATING REGENERATION.
   ONLY ONE TANK IN SERVICE THE OTHER IN REGENERATION OR STANDBY.
2. SYSTEM WIRED FOR 3–WAY SOLENOID OUTPUT.
   COIL A CLOSES THE DIAPHRAGM VALVES OF LAG UNIT.
   COIL B CLOSES THE DIAPHRAGM VALVES OF LEAD UNIT.
3. VALVE SHOWN IN SERVICE POSITION.

17727-02 REV E

SERVICE ASSEMBLIES

24 Hour Gear Assembly:
19205 .... Gear Assy, 24 Hour, Silver, 5600, 12AM
60519-02 .... Gear Assy, 24 Hour, 2 Times a Day Regen
60519-03 .... Gear Assy, 24 Hour, 3 Times a Day Regen
60519-04 .... Gear Assy, 24 Hour, 4 Times a Day Regen
60519-06 .... Gear Assy, 24 Hour, 6 Times a Day Regen

Air Checks
60002-34 .... Air Check, #500, 34 inch Long
60003-34 .... Air Check, #500, HW, 34-inch Tube
60009-00 .... Air Check, #900, Commercial, Less Fittings
60009-01 .... Air Check, #900, Commercial, HW Less Fittings

Brine Line Flow (BLFC):
60010-25 .... BLFC, 1650, .25 gpm
60010-50 .... BLFC, 1650, .50 gpm
60010-100 .... BLFC, 1650, 1.00 gpm
60020-25 .... BLFC, 1600, .25 gpm
60020-50 .... BLFC, 1600, .50 gpm
60010-100 .... BLFC, 1600, 1.00 gpm

Brine Valves:
60011-xx .... 1650 Brine Valve
60029-xx .... 1600 Brine Valve
60034-xx .... 1700 Brine Valve
60604-xx .... 1710 Brine Valve
-xx is for flow button size

Cam Assemblies:
60160-15 .... Drive Cam Assy, Std, Blue

Drain Line Flow Controls:
60365-xx .... Brass DLFC 3/4-inch NPT

Drive Assemblies:
60050-21 .... Drive Assy, 2750, STF, 120V Softener

Injector Assemblies:
60480-xx .... 1600 Injector Assembly
60485-xx .... 1600 Injector Assembly
60381-xx .... 1700 Injector Assembly
60486-xx .... 1700 Injector Assembly
-xx is for the size injector used

Meters:
60391 .... 2750 Meter Assy, Std, Plastic Cap, 1-inch
60392 .... 2750 Meter Assy, Ext, Plastic Cap, 1-inch

Covers:
60232-110 .... Cover, Designer, 1pc, Black
60219-02 .... Cover Assy, Enviromental, Black

Piston Assemblies:
60090-HF .... Piston Assy, 2750/2900
60091-HF .... Piston Assy, 2750, Hot Water
60101-00 .... Piston Assy, 2750 NHWBP Filter, Conversion Kit
60101-01 .... Piston Assy, 2750 NHWBP
60101-02 .... Piston Assy, 2750 NHWBP, 1600 Conversion Kit
60101-03 .... Piston Assy, 2750 NHWBP, 1700 Conversion Kit

Auxillary Switch Kit:
60320-12 .... Switch Kit, 1500 through 2850
60320-02 .... Switch Kit, 3200/9000 Timer

Program Wheel Assemblies:
60405-20 .... Program Wheel, w/3/4-inch Ext Label 1-1/2 inch Std
60405-30 .... Program Wheel, w/1-inch Std
60405-40 .... Program Wheel, w/1-inch Ext
60405-70 .... Program Wheel, w/1-1/2 inch EXT

Safety Brine Valves
60014 .... Safety Brine Valve Assy, 2310
60038 .... Safety Brine Valve, 2350
60027-FFA .... Safety Brine Valve Body, 2300 Fitting Facing Arm
60027-FFS .... Safety Brine Valve Body Fitting Facing Stud
60026-30 .... Float Assy, 2350, 30-inch Red/Wht
60026-30SAN .... 60026-30SAN Float Assy, 2350, 30-inch HW
60028-30 .... Float Assy, 2300, 30-inch , Blue/White
60068-30 .... Float Assy, 2310, w/30-inch Rod

Sales & Service Aids:
40737 .... Literature, Spec Sheet
42327 .... Literature, 2750 D/F
40717 .... Literature, Catalog Assy, PWT
.... Residential/Commercial

Seal & Spacer Kits:
60121 .... Seals & Spacers, 2750
60122 .... Seal & Spacer Kit, 2750 H/W

Skipper Wheel Assemblies:
14860 .... Skipper Wheel Assy, 7 Day
14381 .... Skipper Wheel Assy, 12 Day

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